

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE 1 OF 2		
2. AMENDMENT/MODIFICATION NO. Am-0006		3. EFFECTIVE DATE 07/22/04		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY U.S. Army Engineer District, Honolulu Corps of Engineers, Bldg. 230 ATTN: CEPOH-CT-C (Jennifer Ko) Fort Shafter, Hawaii 96858-5440		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(X) 9A. AMENDMENT OF SOLICITATION NO. W9128A-04-R-0012		9B. DATED (SEE ITEM 11) 06/02/04	
CODE				10A. MODIFICATION OF CONTRACT/ORDER NO.		10B. DATED (SEE ITEM 13)	
FACILITY CODE							

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc). SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Solicitation No. W9128A-04-R-0012, FY04 MCA PN 52268, Buildings 549 and 552, Whole Barracks Renewal, Phase 4B, Quad E, Schofield Barracks, Oahu, HI

(Continued on Page 2)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF SIGNER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY	16C. DATE SIGNED
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

NSN 7540-01-152-9070

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1. CHANGES TO SPECIFICATIONS. Attached hereto are revised and new pages to the solicitation. The revision mark (Am-0006) is shown on each revised and new page.

a. REVISED SECTIONS/PAGES/PARAGRAPH. Following are revised pages to the solicitation. Changes are indicated in **bold** print. Although the entire section is being re-issued under (Am-0006) only the following section/page/paragraph changed in this section.

Section 00010, Proposal Schedule (Page 00010-3)
Section 00900, Responses to Questions submitted by Planholders (Page A.7)
Chapter 2, paragraphs 2-2.5.1 and 2-2.5.2
Chapter 5, paragraph 5-4.9.5.3

b. NEW PAGES/CLAUSES/PROVISIONS/SECTIONS. The following items are added to the solicitation:

Section 00900, Responses to Questions submitted by Planholders (Pages A.19 and A.20)

2. REVISED DRAWINGS (ISSUED). The following revised drawings replace like-numbered drawings and are issued herewith:

<u>RING NO.</u>	<u>SHEET NO.</u>	<u>LTR</u>	<u>REVISION DATE</u>
2	T-2	b	7/12/04
3	T-3	b	7/12/04
6	C-3	b	7/12/04
7	C-4	b	7/12/04
9	C-6	b	7/12/04
10	A-1.1	b	7/12/04
12	A-1.3	b	7/12/04
14	A-1.5	b	7/12/04
18	A-2.4	b	7/12/04
19	A-2.5	b	7/12/04
20	A-2.6	b	7/12/04
21	A-3.1	b	7/12/04
22	A-3.2	b	7/12/04
23	S1.01	b	7/12/04
27	S2.01	b	7/12/04
31	M-1	b	7/12/04
32	M-2	b	7/12/04
33	M-3	b	7/12/04
34	M-4	b	7/12/04
35	M-5	b	7/12/04
41	E-1	b	7/12/04

3. The proposal closing date of July 28, 2004, 2:00 P.M., Hawaiian Standard Time, remain unchanged.

SECTION 00010
PROPOSAL SCHEDULE

FY04 MCA PN52268, Buildings 549 and 552,
Whole Barracks Renewal, Phase 4B, Quad E
Schofield Barracks, Hawaii

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT
Base Schedule:				
1.	Design Work Bldg. 549 and 552	1	Job	\$_____
2.	Construction Work 549 and 552	1	Job	\$_____
Total Base Schedule				\$_____
Option:				
3.	Sergeant Smith Theater Parking Lot	1	Job	\$_____
Total Base Schedule plus Option				\$_____

THE FOLLOWING WILL BE COMPLETED BY THE CONTRACTING OFFICER UPON AWARD:

TOTAL AWARD AMOUNT (**Base Schedule plus Option**) \$_____

NOTES TO PROPOSAL SCHEDULE:

1. By submission of an offer under the OPTION, Offeror agrees that the Government may exercise the OPTION at the time of award, or at any time within 90 days following the date of the award of the basic contract. (See Provision No. 52.217-5, EVALUATION OF OPTIONS, in Section 00100 and Section 00800, S-17.1, OPTION FOR INCREASED SCOPE -- SEPARATELY PRICED LINE ITEM).

2. If contaminated soil is encountered during construction, the Contractor may be required to provide or perform some of the following items. To minimize delays associated with encountering contaminated soil during construction, Offeror shall provide a unit price for each of the following items. The unit price for each item must reflect the total cost (including direct costs, indirect costs, markups, etc.) for that specific item. If contaminated soil is encountered during construction, the Contractor shall promptly notify the Contracting Officer that such a condition has been encountered, describe the condition encountered, and provide a listing of which of the following items will be required. Upon notification of encountering contaminated soil, the Contracting Officer will promptly investigate the matter, and if necessary, issue a modification directing the Contractor to proceed with any or all of the required items (using the following unit prices):

A.	DESCRIPTION	Unit	Unit Price
	1) Prepare Sampling Analysis Plan	Ea	\$_____
	2) Prepare Site Safety and Health Plan	Ea	\$_____
	3) Perform Tests:		

a) Polynuclear Aromatic Hydrocarbons (PAHs)	Ea	\$_____
b) Aromatic and Halogenated Volatile Organic Compounds (including Methyl Ethyl Ketone)	Ea	\$_____
c) Lead/Cadmium	Ea	\$_____
d) Polychlorinated Biphenyls (PCBs)	Ea	\$_____
e) TPH- Diesel/Oil Range Organics (Excavated area)	Ea	\$_____
f) TPH-Gasoline Range Organics	Ea	\$_____
g) TCLP (stockpile)	Ea	\$_____
h) TPH- Diesel/Oil Range Organics (Stockpiles)	Ea	\$_____
4) Handling of Contaminated Soil		
a. Remove and Dispose Contaminated Soil	CY	\$_____
b. Replace with New Soil	CY	\$_____

B. PAYMENT

The Item numbers described below correspond to the item numbers above in Note 5A.

- a. Item No. 1) Prepare Sampling Analysis Plan, will be paid for at the contract unit price, including all incidental items necessary to complete the work.
- b. Item No. 2) Prepare Site Safety and Health Plan, will be paid for at the contract unit price, including all incidental items necessary to complete the work.
- c. Item No. 3)a, 3)b, 3)c, 3)d, 3)e, 3)f, 3)g, and 3)h. Perform Tests, will be paid for at the contract unit price, including sampling, analyses, reports and all incidental items necessary to complete the work.
- d. Item No.4a), Remove and Dispose Contaminated Soil:
 - (1) Measurement for payment will be to the nearest cubic yard of contaminated soil acceptably removed and disposed.
 - (2) Payment for contaminated soil acceptably removed and disposed will be made at the applicable contract unit price per cubic yard, including, cleanup, and all incidental items necessary to complete the work.
- e. Item No.4b), Replace with New Soil:
 - (1) Measurement for payment will be to the nearest cubic yard of new soil placed.
 - (2) Payment for new soil placed will be made at the applicable contract unit price per cubic yard, including, cleanup, and all incidental items necessary to complete the work.

PAYMENT(S)

Compensation for all work to be performed under this contract will be made under the payment item(s) listed herein. Price(s) and payment(s) for the item(s) shall cover all work, complete and finished in accordance with the specifications, schedules, and drawings, and shall be full compensation for all work in connection therewith, including quality control and cost of performance-and payment-bond premiums as specified in the CONTRACT CLAUSES. Price(s) and payment(s) shall constitute full and final compensation for furnishing all materials, equipment, management, supervision, labor, transportation, fuel, power, water, and all incidental items necessary to complete the work, except as otherwise specified to be furnished by the Government. For the purpose of CONTRACT CLAUSE entitled "PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS", the term "designated billing office" and "designated payment office" are as follows:

a. Billing Office
U.S. Army Engineer District, Honolulu
Schofield Barracks Resident Office, Bldg. 230
Fort Shafter, HI 96858-5440

b. Payment Office
USACE Finance Center
Attn: CEFC-FP
5722 Integrity Drive
Millington, TN 38054-5005

Item numbers mentioned herein after correspond to the item numbers in the PROPOSAL SCHEDULE.

a. Item Nos. 1, Design Work, will be paid for at the contract price, to include design for, site preparation, building, waterlines, sanitary-sewer system, storm-drainage system, pavement, concrete sidewalks, curbs, and gutters, landscaping, mechanical work, electrical work, and all incidental items necessary to complete the work.

b. Item Nos. 2, Construction Work, will be paid for at the contract price, complete in place and ready for use, including site preparation, building, waterlines, sanitary-sewer system, storm-drainage system, pavement, concrete sidewalks, curbs, and gutters, establishment of turf, mechanical work, electrical work, testing, final connections, cleanup, and all incidental items necessary to complete the work.

c. Item Nos. 3, Sergeant Smith Theater Parking Lot, Option Item, will be paid for at the contract price, complete in place and ready for use, including site preparation, pavement, concrete sidewalks, curbs, and gutters, cleanup, and all incidental items necessary to complete the work.

-- End of Section --

SECTION 00900
RESPONSES TO QUESTIONS
SUBMITTED BY PLANHOLDERS
FOR
SOLICITATION NO. W9128A-04-R-0012

Q1. From Dick Pacific, clarification to RFI #1, dated 6/15/04 -

I have reviewed Add #1 and it appears to answer most of the questions I asked in my RFI # 1. However as Sht C-3 is still unchanged please clarify how we are to install the new electrical and mechanical loop under the existing interior roads fronting the interiors of bldg 554 and 551 if they are not removed and reconstructed.

RESPONSE: The following statement should clarify what is required for areas impacted by utility work. Any existing road, walkway or other items that must be removed or otherwise impacted by utility work must be restored to existing condition.

Q2. From Capitol Furniture Distributing Inc., dated 5/27/04 -

I am wondering who will secure the furnishings for this facility?

RESPONSE: Furniture is not part of this construction project. Furniture will be purchased separately by the government.

Q3. From Dick Pacific, RFI #3, dated 6/16/04 -

Reference: Structural Questions/Clarifications on the RFP

Question 1:

The concept structural drawings do not indicate any strengthening of the existing wall footings for seismic loads. We wish to verify that because the shear walls are lightly stressed and there are no non-compliant issues with the foundations (based on the tier 1 evaluation provided), the foundations do not need any seismic upgrades.

RESPONSE: The Seismic Evaluation Study and Progressive Collapse Vulnerability Assessment report does not include strengthening of existing foundations because no deficiencies were found based on a tier 1 evaluation (TI 809-05).

Question 2:

The concept structural drawings do not indicate any strengthening of the existing wall footings for the mitigation of progressive collapse. Are the existing wall footings adequate to support the additional 150 mm of shotcrete around the perimeter of the building? Or will these footings need to be enlarged?

RESPONSE: The footings for the walls to receive shotcrete will likely need to be enlarged based on the available geotechnical information.

Question 3:

Page 6-4 in the Statement of Work (9 April 2004) indicates "The bidder shall assume that existing structural members are adequate for existing floor loads." On the other hand, the Structural Concept Design and Calculations in Attachment 3 identify a number of deficiencies to the floor framing under gravity (i.e. dead and live) load. As these two portions of the RFP appear to be in conflict, we wish to verify that the structure can be assumed adequate for the existing floor loads and that strengthening is only required if the live load in an area is increased (i.e. at the new cooling tower, machine rooms, locker rooms and arms rooms).

RESPONSE: The two statements do not conflict, however the structural evaluations study and progressive collapse vulnerability study has been amended. Seismic Evaluation Study and progressive Collapse Vulnerability Assessment, addresses existing structural members that are affected by requirements for

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seismic, ATFP, new dead or new live floor loads, as required by referenced codes. The referenced statement in Page 6-4, refers to portions of the structure that are not altered or affected by the alterations (seismic, ATFP or new floor loads). Those unaffected areas by alterations are not required to be strengthened in compliance with the referenced code requirements. Refer to IBC 2000 para 3402.1, Existing buildings or structures and para 3402.2.1 Existing live load.

Can it be assumed that the floor framing for all the typical office, classroom and residential areas are sufficient for gravity loading? What is the live load requirement for the TA-50 Gear rooms?

RESPONSE: Concur, assume the existing framing as explained above are acceptable provided they are unaffected by new seismic, new AT/FP, new dead or new live loads. Gear room live load is 75 psf.

Question 4:

The structural concept drawings indicate the use of FRP on the existing slabs and girders. FRP systems by themselves have low fire endurance. Does the proposed FRP composite need to be insulated in any manner to protect it from fire? This may not only have an impact on the thickness of the overlay, it may also have a significant impact on the overall cost of the FRP system.

RESPONSE: The concept drawings will be revised to show steel beam reinforcement of the existing concrete slab. Should FRP be used, fire protection issues will need to be addressed. To be provided in forthcoming Am-0006.

Question 5:

For the purpose of the progressive collapse analysis, is the existing breezeway (between grid lines 10 & 11) in Building 549 considered an exterior portion of the building? There was no consideration of element removal along grid lines 10 & 11 in the structural concept design. We wish to verify that although this area is "open" it is not considered exterior.

RESPONSE: Breezeways are not considered exterior.

Question 6:

Paragraph 9.2 (Section 01012–Page 9) in Attachment 17 indicates that all drawings shall be created in Microstation format. Can AutoCAD be used in lieu of Microstation?

RESPONSE: No.

Question 7:

Table 1 in the structural concept calculations (SSFM report pages 6 - 9) provides the Tier 1 seismic evaluation and recommendations for all four buildings in Quad E. For both buildings 549 & 552, a deficiency is noted under "Seismic–Reinforcing Steel." The SSFM report states, "Horizontal reinforcing steel ratio in shear walls less than 0.0025." However, in the recommendation section it states, "Since stresses in shear walls from Tier 1 analysis are low and there is significant redundancy in the number of walls, assume low steel ratio is adequate." As a result, no remedial action is proposed for this deficiency on the concept drawings. We wish to verify that this reasoning is acceptable to the Army and no form of retrofit is required.

RESPONSE: Confirmed, no retrofit required for existing shearwalls with low steel ratio.

Question 8:

The Structural Concept Calculations (See page 24) indicate a 3"–20 Gage deck with ½" puddle welds at supports and 1 ½" TSW @ 24" o.c. As no drawings of the existing building have been provided, we wish to verify that this is indeed the composition of the roof diaphragm.

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RESPONSE: The welding shown in the calculations is based on visual observation.

Question 9:

There are a number of non-load bearing concrete and CMU walls being added on the interior of the building. No new wall footings are indicated on the structural drawings. Please verify if additional footings are required or if these walls can sit directly on the slab-on-grade.

RESPONSE: New footings should be provided for the non-bearing CMU and concrete walls.

Question 10:

Section 5-7 in the Scope of Work (Page 5-12) indicates that the Arms Vault shall have: 6" slab-on-grade, 8" thick concrete walls and an 8" thick concrete ceiling. The structural concept drawings do not indicate any upgrades to the existing structure in these areas. Does the existing structure need to be upgraded to meet these requirements (i.e. does the slab-on-grade and floor slab need to be removed and replaced to meet the requirements)?

RESPONSE: Yes. Provide construction to meet the requirements of AR-190-11 including new concrete grade slabs and roof slabs as required. Note that AR-190-11 requires 6' minimum concrete ceiling.

Q4. From Dick Pacific, RFI #4, dated 6/16/04—

1. In order to analyze the buildings in this project for progressive collapse avoidance, we are required to use a design document that is not mentioned in SOW 6.2.1 Design Criteria.

Specifically that document is *Department of Defense Minimum Anti-Terrorism/Force Protection Construction Standards, Guidance on Structural Requirements*". The most current effective date on this document that we have is March 05, 2001.

Please confirm that this is the correct version of this document to use. If a later version is to apply may we be furnished with the correct one?

RESPONSE: Concur, the latest date of the document Department of Defense Interim Anti-Terrorism/Force Protection Construction Standards, Guidance on Structural Requirements, is Mar 5, 2001. Note that the reference document title in your letter is been corrected to the title given above. It is the latest specific DOD guidance on progressive collapse.

2. In addition, the above referenced document makes mention to the possibility of a facility owner requiring more stringent limits on damage. Please verify that this facility is not required to meet a "more stringent limit" on acceptable damage and if it is please provide a definition.

RESPONSE: There are no additional or more stringent progressive collapse requirements by owner.

Q5. From Dick Pacific, RFI #5, dated 6/16/04—

1. Regarding windows—we have been furnished with original window details on sht. A-3.2 We are also given instruction under the Arch SOW 5-4-10 to provide historic windows in conformance to these details

This appears to conflict with the directions given in SOW 15-5 which allows a framestyle similar to that used in Quad F.

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In Quad F while the windows are similar in concept they do not fully replicate the profiles shown on A3.2. In addition there are interior wood trims at the head and the stool of the window that do not appear to be provided on Quad F.

RESPONSE: The windows are to match those installed in Quad F in terms of looks (number of panes, etc) and color. The windows must also comply with ATFP requirements.

2. Please confirm that from an appearance and historical standpoint that a window installation similar to that of Quad F is acceptable in satisfying the current RFP requirements on this project.

RESPONSE: The windows are to match those installed in Quad F in terms of looks (number of panes, etc) and color. The windows must also comply with ATFP requirements.

3. Another question relates to Attachment 18 the Historical Survey. What is included is Quad D (pg 63-81) not Quad E. Are we to follow the discussion for Quad D or should we be furnished with the discussion for Quad E?

RESPONSE: Will be provided in Am-0003.

Q6. From Dick Pacific, RFI #6, dated 6/16/04—

In addendum 01 drawings Sht A 1.5 note # 6 has been added which is confusing to us. The note calls for a window to be installed 152 MM in front of a block or concrete infill. By our measurements we do not have room to do this. The existing wall is 254 mm, The added shotcrete wall is 152 mm. The window frame is recessed approx 76 mm. The window frame is approx 100 mm. This leaves only 76mm not 152 mm unless the 152mm shotcrete wall thickness is compromised in some way. Additionally this is a problem if the shotcrete wall is not required. Is the goal of the infill security? Could a wire security screen be provided at the interior of the window in lieu of the infill? Could a section sketch be provided to make what is required clear?

RESPONSE: Windows can be centered approximately 76 mm on each side or pushed back to infill wall.

Q7. From Dick Pacific, RFI #7, dated 6/21/04—

At Bldg 552 there is a room on the ground floor that exhibits Radiological warning signs but is not highlighted in any way in the environmental report. See attached picture. Please confirm that there are no expected environmental concerns resulting from the current use of that room.

RESPONSE: There are no environmental concerns related to the existing NBC rooms.

Q8. From Dick Pacific, RFI #12, dated 6/21/04—

On page SOW 10-6 section 10-5.2 states: "Compressor variable frequency drive (VFD) motor and controls shall have the following characteristics." Attachment 9 The concept design analysis does not describe variable speed chiller motor, and it is not commonly deemed economic for the size of chillers needed for the project. Please confirm if the chiller is to be provided with variable speed compressor motors.

RESPONSE: Chillers are to be provided with variable speed compressor motors.

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Q9. From Dick Pacific, RFI #2, dated 6/15/04–

1. Relating to USTs environmental SOW 16.6

Please clarify whether or not all USTs are to be removed as part of this project including those tanks associated with Bldgs 551 and 550.

RESPONSE: To the best of our knowledge, there are no USTs in Bldgs 549 and 552. If any USTs are discovered during construction a modification will be processed for removal of the UST. Work In Bldgs 550 and 551 is not a part of this contract.

2. Are we to assume that undocumented USTs mentioned are present and must be removed.

RESPONSE: Again to the best of our knowledge, there are no USTs in Bldgs 549 and 552. If USTs are discovered a modification will be processed for their removal.

3. How much petroleum-contaminated soil should be allowed for each tank? Or are we to treat the contaminated soil removal as a separate action in accordance with section SOW 16.6.1.1 and 16.6.2

RESPONSE: Please see revised Proposal Schedule in Amendment 0005 for unit price cost for removal of contaminated soil.

Q10. From Dick Pacific, RFI #8, dated 6/21/04–

1. RFP paragraph 10-4.3 states that the equipment sizes shown on the attached documents are minimums. Please clarify if this requires the bid to include the indicated sizes as a minimum. Is smaller equipment allowed if design load calculations show the load to be less than what is called out in the RFP.

RESPONSE: Equipment sizes shown on the attached documents are minimums. Smaller equipment is not allowed.

2. Are the pipe sizes shown on the concept drawings mandatory minimums?

RESPONSE: Yes.

3. RFP specifies glazing to be used on the project. If the glazing does not meet the other criteria specified by the RFP (such as energy efficiency), is the glazing to be changed?

RESPONSE: Yes. The glazing shall meet all minimum criteria required.

4. Is electrical reheat acceptable for the Arms vault?

RESPONSE: Yes.

5. Are the number of zones shown on the concept drawings mandatory? Is consolidation of similar thermal spaces into common zones for administration spaces acceptable?

RESPONSE: Mechanical layouts shown on drawings are conceptual. Contractor is required to do his/her own calculations; sizing and selection of equipment, piping, ductwork, and related accessories, and layout to ensure proper fit and function.

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6. Air intake and exhaust grilles or louvers on the mechanical concept drawings are not shown on the Architectural concept drawings. Are they allowed to penetrate the exterior walls and satisfy the Historic Preservation requirements as shown?

RESPONSE: Drawings will be revised to show air intakes routed to the roof in forthcoming Am-0006.

7. What capacity excess should be provided for backup chilling of Quad F?

RESPONSE: Per Corps of Engineers, Quad E cooling system is sized for serving Buildings 549, 550, 551 and 552. Interconnection between Quad E and Quad F is for supplemental use only.

8. What pumping consideration is to be made to backup Quad F, i.e. head loss and flow?

RESPONSE: Per Corps of Engineers, Quad E chilled water pumping system is sized for serving Buildings 549, 550, 551 and 552. Interconnection between Quad E and Quad F is for supplemental use only.

9. Cooling tower specified by RFP conflicts with selection in the attached concept design calculations/selections.

RESPONSE: Cooling tower in the attached concept design calculations/selections is provided for information only. Cooling tower provided should be in accordance with the RFP.

10. Paragraph 10-5-2.15 requires cooling tower noise control to "meet maximum sound level indicated." None was found. Please provide the maximum sound level criteria.

RESPONSE: Mechanical systems including cooling tower shall comply with ASHRAE Handbook and Manuals sound criteria. Acoustical treatment shall be provided to meet these levels.

Q11. From Dick Pacific, RFI #13, dated 6/28/04—

Please provide functional and area requirements information for the Chaplains Office and waiting area shown on the third floor building 549 Sht. A1.3. We have been unable to locate this information.

RESPONSE: See Sheet T-3.

Q12. From Nan, Inc., RFI #2, dated 6/28/04—

Architectural/Historical Questions

1. Door Type DF2A is noted on the Building 549—Third Floor Renovated Plan (ref. Sheet A-1.3). However, it is not listed in the Door Schedule on Sheet A-3.1. Please provide door schedule information for Door Type DF2A.

RESPONSE: All door type DF2A should be a door type SF2A.

2. Is acoustical treatment of the cooling tower required due to proximity of adjacent residential areas? If so, what is the desired STC rating of the equipment/enclosure or sound level?

RESPONSE: Mechanical systems including cooling tower shall comply with ASHRAE Handbook and Manuals sound criteria. Acoustical treatment shall be provided to meet these levels.

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3. Government Historical Consultants/Representatives have taken exception to the parking lot light fixtures on Quad C, disagreeing with the use of standard seamless aluminum pole fixtures specified in the RFP, preferring a more "historical" look. However, after review of the Quad E RFP, we found that this is not addressed in the RFP's historical section. Furthermore, the RFP does not require wholesale replacement, and a fixture change would not be sensible unless they are all replaced.

RESPONSE: Parking lot light fixtures replaced by this project shall match the historical street light fixtures installed on Wright Avenue in Wheeler Army Airfield.

4. SOW Para. 9-4-21 says to provide area lighting as shown on the RFP drawings. Where is it shown, and does it mean to provide a uniform level of lighting along the entire perimeter of each building? In addition, Government Historical Consultants/Representatives have taken exception to the noted fixture type to be mounted on seamless aluminum poles. Does the government have an acceptable light fixture that can be used for this area? A similar area lighting requirement is also noted in SOW Para. 9-1.11, Building Security Lights. This is a relatively high level of lighting, particularly for facilities that border a residential area. And again, does the government have a light fixture that is acceptable to the Government Historical Consultants/Representatives? There is a wide range of fixture costs, when historical appearance is necessary.

RESPONSE: Area lighting are shown on revised drawings in Amendment 0006. Fixture type to match light fixtures installed along Wright Avenue on Wheeler Army Airfield. Level of lighting for Building Security Lights shall be as indicated in Paragraph 9-1.11. Regarding the historical concerns for the Security Lights, please see Paragraph 9-1.10, "Luminaires located in the exterior covered walkways are not a concern provided they are mounted on the interior face of exterior columns so that they are not visible to viewers standing outside the building."

5. What are the "structures" shown at the roof of the appendages of Bldg. 552, at Gridlines 6 and 16? And how do they need to be addressed within the contract?

RESPONSE: 'Structures' are existing and to remain.

Q13. From Dick Pacific, RFI #15, dated 6/30/04—

1. "Although not indicated on the SSFM conceptual structural drawings, we assume that the two new cooling towers on the roof of Building 552 will require new structural framing to support the equipment's gravity, wind and seismic forces. It is stated in Section 10-5.2 Cooling Towers (SOW 10-9) that "Framework, structural supports and equipment supports shall be Type 304 stainless steel." Please verify whether or not structural steel added within the attic space of the structure (such as new wide flange support beams) need to be stainless steel".

RESPONSE: Structural steel added to the attic space does not need to be stainless steel.

2. Mechanical design analysis attachment 9 page 3 states that 'the SIPRNET server secure area shall be provided with a chilled water fan coil unit. The mechanical concept drawings Sht. M-3 do not show the room being served by its own individual unit. Please clarify which design concept we should follow.

RESPONSE: Follow Mechanical design analysis for air conditioning SIPERNET server secure area.

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Q14. From Dick Pacific, RFI #9, dated 6/21/04—

In reviewing the function area requirements in the Statement of Work there appear to be some discrepancies.

1. Page SOW2-6 section 2-2.2 states that heavy equipment storage areas are to be provided for five medium and two small companies. The concept drawings only indicate that there are 1 medium and 2 small company areas.

Please confirm the concepts drawings are correct and that we are only providing support areas for the three companies not seven.

RESPONSE: Yes. Provide support areas for three companies. The SOW corrected, see Am-0005.

2. Page SOW2-7 section 2-2.3 calls out the amount of lockers for a large COF and a medium COF. In this project it is my understanding that we are providing for a medium COF and a small COF. Please provide the amount of gear lockers required for a small COF.

RESPONSE: Corrected SOW, see Am-0005. Medium requires 80 lockers, Small requires 40 lockers.

3. Please clarify that section 2-2.5 intention is that mens and womens toilets/showers and lockers would be sized based on the combined usage of the three companies mentioned above. For example based on the chart for mens lockers $82+34+34=148$ lockers are required. Please confirm

RESPONSE: Correct. Mens lockers $82+34+34+150$ lockers.

4. Page SOW2-28& 29 section 2-5.1.3.2 and 2-5.2.3.2 state that the minimum stated dimension for base cabinets and countertops is (including the range width). This appears to be incorrect we believe the correct term would be (excluding the range width). In addition the minimum dimensions stated appear to be significantly less than what is shown on the enlarged unit plans on the RFP concept plans. Which are we to follow?

RESPONSE: The SOW is stating minimum dimensions. Follow the plans.

Q15. From Dick Pacific, RFI #10, dated 6/21/04—

1. On page SOW 9-1 Section 9.1.3 we are asked to provide temporary power to the Bldg 550 ADN. Are existing electrical site distribution, one-line diagrams and plans available for Bldgs 550 and 551 to assist us in determining what this involves? In the absence of this information may we be provided with what the temporary power requirements are for the ADN.

RESPONSE: No diagrams/plans available. ADN requires two 120V, 30A circuits.

2. RFP Attachment #17, pp. 12.2.2.6.1, pg 17 lists Off-Site Plans and One-Line Diagrams. All drawings and SOW presently indicate only on-site work. Please clarify what off-site work if any is required and furnish sufficient information so we may estimate its cost.

RESPONSE: There is no off-site work in this project. Project limits are as indicated on the drawings.

3. On page SOW 2-10 Section 2-2.4.3 Electrical Room(s) 'Each company shall have independent metering and control of the electrical systems for its own spaces If separate electrical metering monitoring power usage) is required then it appears that the quantity of AHU's shown on the concept drawings would not allow for the mechanical power consumption to be separately metered. Please advise if this is a problem

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RESPONSE: No problem.

4. On page SOW 2-27 Section 2-4.13.7.4 Other Requirements states "No piping, conduit or ductwork shall be exposed in exterior corridor" During the site visit we were encouraged to visit Quad F which we did. What we noticed was a certain tasteful amount of conduits and pipes were run exposed in the exterior corridor. It appears that furring of these conduits would have interfered with the historic character of the corridor. May we assume that this project will be viewed similarly and that some conduits can run exposed as was done in Quad F.

RESPONSE: See revised SOW in Am-0005.

5. On page SOW 3-2 section. 3-8, and page SOW 9-16 section. 9-4.22 call for powered access control gates. Does ATP access control power for parking require emergency power?

RESPONSE: No emergency power required for access control.

6. On page SOW 3-3 section 3-9 Do "obstructions within 10 meters of inhabited buildings, .150mm or greater" include polelights or lighting bollards?

RESPONSE: No.

7. On page SOW 12-6 section 12-11.3 States "Smoke sensors with sounder bases shall be provided in each sleeping unit and shared kitchen area". RFP drawing sheet E-2 (Typical Unit Elec Plans), does not indicate any smoke sensors in the kitchen area. Please clarify which guideline we are to follow.

RESPONSE: Provide smoke sensors in accordance with the SOW. Locate in accordance with NFPA 72.

Q16. From Dick Pacific, RFI #11, dated 6/21/04—

1. Sheet T-2, Wall Legend noted "See fire protection drawings for fire ratings of various types of walls". Currently we have not been issued the fire protection drawings. If they exist may we be furnished a copy?

RESPONSE: Disregard wall legend note. The fire rating of various walls were added in the Fire Protection Chapter 12 of our Statement of Work.

2. A1.1, Building 549—Note 12 indicates the entire metal deck and roof truss must be protected by a 1 hr fire resistive spray. In statement of work page 5-3 section 5.3.2 classifies the building to be Type IIB construction with non-combustible non-rated construction. According to our interpretation of the IBC that would not call for the application of the spray-on fireproofing on the steel structure. Is the intent to for it to be applied to exceed code?

RESPONSE: Verified as Type IIB, therefore spray-on fireproofing is not required.

3. A1.1 Building 549, First Floor Renovated Plan indicated one entrance and vestibule for Men's Locker Room. page SOW2-11 section 2-2.5.2 noted "For egress purposes, occupant load shall be equal to the higher of the following numbers: a) number of lockers in the room, or b) the code determined number of occupants...". The floor plan and the chart included in the section indicate more than 150 lockers in Men's Locker Room. More than 50 occupants would require at least two means of egress

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are required for the locker room which is Group A-3 occupancy group as described in SOW5-3, 5-3.6. Where shall the second entrance (egress) and vestibule be? We are unable to readily see how this can be accomplished. The code required number of occupants would only be 32 based on room size. This would not trigger the requirement for the second entrance. Please clarify how we are to proceed.

RESPONSE: For occupant load determination see Am-0005. Egress requirements shall be in accordance with NFPA 101.

4. Sheet T-2, Floor Area Table indicated Occupancy S-2 on entire First Floor of Building 549. The Men's Locker Room is A-3 according to SOW 5-3, 5-3.6. Should the wall shown be considered an occupancy separation between the Men's Locker Room and the storage areas on First Floor?

RESPONSE: For occupancy classifications see Am-0005. The locker room and the storage shall be considered non-separated uses.

5. On page SOW 2-27 section 2-5, noted 'Building 552--Unaccompanied Enlisted Personnel Housing (UEPH)...Only able-bodied military personnel will occupy UEPH Building; handicapped accessibility is not required.' Is accessibility required for the exterior and interior corridors?

RESPONSE: The Unaccompanied Enlisted Personnel Housing is required to be accessible at the ground floor exterior corridor and the ground floor areas accessible to the general public such as the Toilets and Game Rooms.

Q17. From Dick Pacific, RFI #14, dated 6/28/04--

Page SOW 5-4 section 5-4.6.1.1 states provide 4-ply built-up roofing for use over rigid board insulation on metal deck. Sht. A-1.5 states reroof building with roofing that meets spirit high reflectance requirements. As the terminologies being used are somewhat ambiguous please confirm that what is required is removal of the existing roof and insulation down to the metal deck and new roofing and insulation being provided to met the RFP requirements.

RESPONSE: Clarified SOW, See Am-0005.

Q18. From Nan, Inc., RFI #1, dated 6/23/04--

Section 00120: Proposal Submission Requirements and Evaluation Factors for Award

1. Para. 2.5.3.1.1 and 2.5.3.2.1 note that Offerors will receive a "Neutral" rating if "one or more projects were not issued a final performance evaluation." Firstly, we feel that this is unfair as completed and turned over projects may not have a final performance evaluation (PE) issued until after all contractual obligations (i.e. modifications) are met. Furthermore, it has been in our experience that this process can take from 6 months to 1 year after project completion to receive a final PE. Secondly, for non-Federal Government projects (i.e. private), such final PE, similar to those issued under Federal Government projects, may not be issued. In these instances, what can an Offeror provide to meet the requirement for a final performance evaluation (i.e. written and signed statement attesting to "satisfactory or above" performance on the project, copies of project letters and awards received, etc.)?

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RESPONSE: As stated in Section 00120, Offeror who receive a neutral rating will not be rated favorably or unfavorably if one or more projects were not issued a final performance evaluation. Yes

2. Regarding Volume III: Subcontracting Plan, requesting a Small Business Subcontracting Plan from Large Business Concerns, as this is a design-build contract, it is very difficult for an Offeror to list definite subcontractors for this project at the time of bid submittal. If an Offeror is required to list subcontractors to be used on this project, this will limit the competition to only large businesses, as most small businesses do not have the capacity to estimate a design-build project of this size (i.e. RFP concept drawings). Therefore, we ask that the Government hold the Offeror liable to the small business percentage goals presented in its plan, and not necessarily the goals for a specific trade.

For example, if an Offeror proposes to use a women-owned small business painting subcontractor for an X% of the total planned subcontracting dollars. However, after award of the project the Offeror finds that that particular subcontractor is unable to perform on this project. In this case, an Offeror should not be held liable to replace the trade of the subcontract, but rather the percentage proposed for that small business subcontracting concern (i.e. replace with a WOSB plumbing contractor for X%).

RESPONSE: FAR 52.219-9 requires the subcontracting plan to include GOALS expressed in terms of percentages of total planned subcontracting dollars, for the use of small business (SB), small disadvantaged business (SDB), women-owned small business (WOSB), HUBZone small business (HZSB), veteran-owned small business (VOSB), and service-disabled veteran owned small business (SDVOSB) concerns.

It further requires a description of the principal types of supplies and services to be subcontracted to SB, SDB, WOSB, HZSB, VOSB, and SDVOSB concerns.

A substantive plan will target specific SB, SDB, WOSB, HZSB, VOSB and SDVOSB as members of the original team or as potential subcontractors based on past experience, market research, etc.

[Statement of Work \(SOW\) dated 9 April 2004](#)

3. In reviewing the RFP documents, it was noticed that the project name is missing from each page within the SOW, Chapters 1 thru Chapter 16. In order to identify that these pages apply to RFP No. W9128A-04-R-0012, we suggest providing such information in the header/footer of each page.

RESPONSE: Suggestion noted. Will identify SOW with a header on future projects.

4. Attachment 18, Schofield Barracks Historic Architectural Survey. We understand that this attachment is to contain excerpts of the 'Historic Architectural Survey for Significant Features in Quads B, C, D, E, & F and Condition Assessment of Quad F', as applicable to Quad E. However, this attachment contains: the cover page/title page for the entire survey; Section I: Introduction (pages 1 to 21); and Quad D-Buildings 449, 450, 451, & 452 (pages 63 to 81); and the cover page for Section IV: Quad F-Buildings 649, 650, 651, & 652. Please confirm that these pages are meant to be included as part of Attachment 18. If not, please provide the correct applicable pages.

RESPONSE: See Am-0003.

5. The SOW, para. 4.4.4 notes that a quadrangle sign, similar to that provided for Quads C & F, is to be provided on this project. Please provide detail.

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RESPONSE: The selected Contractor shall detail the sign to match Quad C & F quadrangle sign.

6. Section 5-1.2.3 indicates to remove existing windows and doors, and enlarge opening to provide new fenestrations to meet SHPO approval. In previous barracks renewal projects, enlargement of openings were not desired by the historical staff. Please verify that the former statement is indeed the intent on this RFP.

RESPONSE: Enlargement of openings for new doors are for Mechanical Equipment that need larger openings for maintenance.

7. Section 5-4.6.1.1 requires a built-up roofing (BUR) system with an Energy Star certification. However, Modified Bitumen Roofing systems have almost completely replaced BUR in Hawaii over the last 15 years, with newer technology that produces a rubber modified (SBS) asphalt sheet membrane that has superior weathering characteristics to that of Conventional Fiberglass-Asphalt sheets. Therefore, can a Modified BUR system be used in lieu of BUR noted in RFP?

RESPONSE: We feel that it is acceptable as long as it is equal to or better than specified. Also, with Energy Star certification.

8. Section 5-4.6.2 requires a manufacturer's 20 yr warranty on copper. We are not aware of any manufacturer who will provide this. If the COE has access to such information, please provide.

RESPONSE: Deleted 20 year warranty requirement.

9. SOW para. 5-5.12.3 (page 5-11) provides a table of FSTC wall ratings for various spaces within the buildings. Do the doors in exterior walls of these spaces also need to have this same rating, i.e., at Mechanical Rooms? Would flush acoustically rated HM doors be acceptable in lieu of the noted paneled "historic" type doors?

RESPONSE: Door are not required to have the same FSTC rating as the walls. Provide "historic" type doors as indicated on drawings.

Architectural Questions

10. Sht. A-1.5 paint colors indicate only 2 colors—a light and dark color. Are more colors required and do they need to match recently renovated Quads?

RESPONSE: For now, only two (2) colors are called for. See Note #3 on Sheet A-1.5.

11. Sht. A-1.5 shows louvers on the walkway side of the gym. On similar past projects, Government Historical Consultants/Representatives have taken exception to louvers where there once were windows. Please verify that this is indeed the intent on this RFP.

RESPONSE: The louvers are presently existing. Our intent is to replace them. It is also a safety issue because it is a gym.

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12. Exterior elevations do not show any wall louvers or grilles that may be required for HVAC. Is it acceptable to route outside air and exhaust ducts to wall openings with louvers rather than routing them to the roof? On similar past projects, Government Historical Consultants/Representatives have expressed a desire to keep the roof lines as clear of mechanical equipment as possible to restore the appearance of the original construction.

RESPONSE: Outside air intakes are required to be routed to the roof.

13. Sht. A-2.5 roof bracket detail shows BUR on plywood decking. Structural detail 2/S2.04 and SOW 5-4.6.1.1 indicate that there is a metal deck. Please clarify.

RESPONSE: Delete plywood deck. See SOW 5.4 Section 5-4.6.

Civil Questions

14. Note 2 on sheet C-3 indicates all existing utility lines and manholes that are not utilized shall be removed. Please confirm if the limit of utility removal will be confined to the project limit indicated on the drawing.

RESPONSE: Yes, we can say the limits of existing utility removal is limited to the project limits as the utility removal for the remainder of the site can be accomplished in the future.

Structural Questions

15. Sheet S1.01, progressive collapse item 3 and detail 2/S1.01 indicate a new beam along the lanai for progressive collapse. The floor plans do not reflect columns to support the new beam. Are columns allowed to be dropped onto the lanai or is the requirement to hang the beams from the existing floors?

RESPONSE: Adding new columns along the exterior lanai has not been approved by Historical Preservation authorities. The concept is based on a design in which columns are not added.

16. Sheet S1.01, Live Load Retrofit Schedule, Item 2, indicates that FRP should be installed on the top and bottom of the slabs. Has any investigation of the existing floor slabs been done to determine that FRP can be applied to the surfaces of the slab?

RESPONSE: Investigation has not been done to determine if FRP can be applied to the surfaces of the slab. The concept design has been changed to steel beam reinforcement of the existing concrete slab in lieu of the FRP.

17. Sheet S1.01, Live Load Retrofit Schedule, Item 2, FRP is indicated on the top and underside of the slabs and also on the beams for strengthening, yet SOW 6, para 6-5.7 indicates that existing members are to be assumed adequate for existing loads. The calcs appear to indicate that the FRP is included as an enhancement for AT/FP. Please clarify the extent to which FRP is required and if there is a minimum design requirement for the FRP.

RESPONSE: FRP has been deleted. Revised drawings will be issued in Am-0006 to provide steel beam reinforcement for the existing concrete slab.

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18. Sheets S1.01 and S2.01 indicate shotcrete on the exterior walls. A note specifies that 150 mm thick shotcrete walls are to be provided. Is the 150 mm thickness the minimum thickness that will be allowed and is the thickness based on a composite wall thickness?

RESPONSE: The 150 mm thickness of the shotcrete walls is based on a non-composite section.

19. The drawings and calcs do not appear to indicate that any work is needed for the existing transverse shear walls. The calcs indicate that the existing walls are okay for strength but do not meet FEMA 310 requirement for reinforcement ratio. If the wall stresses are okay, can the walls be considered adequate? Or do walls need to be strengthened anyway to increase the reinforcement ratio in the walls? If walls need to be modified or added, will the floor plans accommodate new or thickened shear walls?

RESPONSE: Confirmed, no retrofit required for existing shearwalls with low steel ratio.

20. On Bldg 552, the architectural drawings appear to indicate that walls on grids 6 and 16, on the courtyard side of grid A are being demolished. The structural drawings do not indicate that these elements are being removed. There does not appear to be provisions on the floor plans to provide new supports for the floors and roofs on these grids. Are bearing walls on these grids being removed? If so, can the floor plan be modified to accommodate new columns or walls?

RESPONSE: Only the chase portion of the bearing walls along grids 6 and 16 will be removed. The new concept design provides support for the floor by adding new steel beams and girders. The contractor shall also provide enlarged foundations to support the proposed loads.

21. Cooling towers are shown on the roof of Bldg 552. The plans do not appear to indicate framing for the cooling tower structure. Is it intended that the cooling tower supports be incorporated into the given typical floor layout. If so, to what extent can the room layouts be modified to accommodate structural framing?

RESPONSE: The contractor shall provide additional framing and necessary reinforcement to the existing framing to support the new cooling tower.

22. The wind criteria noted in the structural SOW, Ch. 6, indicates that the wind design shall be based on ASCE 7, exposure C conditions. If the site conditions meet the requirements for exposure B, can exposure B be used?

RESPONSE: No. Use exposure C for hurricane prone area.

23. The SOW indicates that new footings shall be designed for an allowable bearing pressure of 3500 psf. Our experience is that bearing pressures under similar existing footings may exceed this value. Can it be assumed that footings that are not affected by the seismic upgrade are okay and will not require enlargement to reduce bearing pressures?

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RESPONSE: Where footing loads are not increased by seismic, ATRP, new live or new dead loads, existing footings may be assumed to be adequate. The contractor's soils engineer should apply appropriate engineering judgment for determining adequacy of existing footings where loads are increased.

24. Item 7 in the Seismic Retrofit Schedule, sheet S1.01 etc., does not appear to be identified on the plans. Please identify where the note applies.

RESPONSE: Item 7 of the seismic retrofit schedule applies to Building 550 which is not in the current scope of work.

25. Sheet S1.01 indicates cmu for the elevator shaft in Bldg 549. Sheet D/A1.4 appears to indicate concrete construction. Is either cmu or concrete acceptable?

RESPONSE: Either CMU or concrete may be used for the elevator walls.

26. The soils report (Attachment 7) that is provided is for a cooling tower installation. Can the recommendations in the report be used for the foundation design for Bldgs. 549 and 552?

RESPONSE: Yes.

27. The soils report (Attachment 7) indicates that the cooling towers for Quad E weigh 25,000 lbs each. Is the cooling tower referenced in the soils report the same equipment that will be located on the third floor of Bldg 552?

RESPONSE: The cooling towers referenced in attachment 7 are not the same equipment to be installed for this project.

Mechanical Questions

28. The Mechanical Basis states that "Hot water heat recovery pumps will extract hot water from heat pumps and deliver to storage tank." However, on the plans, we could not find the location of the heat pumps and could only find auxiliary condensers. Please confirm if a heat pump is to be provided or are the chillers just to be provided with auxiliary condensers for pre-heating purposes. If a heat pump is required, where will it be located?

RESPONSE: Chillers are provided with auxiliary condensers for pre-heating purpose.

29. Based on our review of the hot water sizing calculations and size of the hot water storage, it appears that the hot water system shown on sheet M-3 is sized for only one Barracks building only. Please confirm if there is adequate capacity to support Building 550 in the future. If not, where will equipment be located?

RESPONSE: Hot water calculation is based on TECHNICAL LETTER NO (ETL). 1110-3-489. Hot water system is designed to provide hot water for Buildings 549, 550, 551 and 552. Mechanical layouts shown on drawings are conceptual. Contractor is required to do his/her own calculations; sizing and selection of equipment, piping, ductwork and related accessories and layout to ensure proper fit and function.

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30. The RFP calls for welded black steel kitchen exhaust duct. Will the game room kitchen be provided with a commercial type grease hood? If so, will a an exhaust fan be required?

RESPONSE: Game room should have commercial type kitchen hood. Exhaust fan should be required.

31. Are sectional isolation valves required along the cold water, hot water, hot water return, CHWS, and CHWR loops?

RESPONSE: Yes

32. Is the existing roof adequate to support the new cooling towers proposed to be installed on Building 549?

RESPONSE: According to structural engineer the existing roof is not adequate to support the new cooling tower. Additional framing will require to support the new cooling tower.

33. Based on our review of the drawings, the chiller plant is located directly beneath the second floor training and classrooms. Is noise a concern and has there been consideration in locating the plant somewhere else?

RESPONSE: The plant is located in the building as requested by Corps Historical Representative. Noise may be a concern and should be a consideration by the design-build contractor.

34. AT/FP measures typically require that outside air intakes be located at roof level so that they are not readily accessible. Based on our review of the drawings, it appears that many of the main central station air handling units draw outside air directly from the exterior walkway area. Will this be acceptable per AT/FP requirements?

RESPONSE: Outside air intakes shall be located on the roof.

Fire Protection Questions

35. Will the attic space for each of the buildings require fire sprinklers?

RESPONSE: Attic space currently is not considered a combustible concealed space and does not require fire sprinkler protection. However, the design must take into account any new construction materials.

Electrical Questions

36. The electrical scope of work calls for removal of oil filled transformers and the existing underground secondary system feeding Buildings 549, 550, 551, and 552. The RFP electrical drawings show new transformers for Building 549, 552, and the chiller plant. What happens to the electrical services to Buildings 550 and 551?

RESPONSE: The electrical services to Buildings 550 and 551 must remain.

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37. Historically correct fixtures are difficult to determine due to the wide range of costs available. Therefore, please provide information on what types of luminaires are to be used on the exterior of the building, as well as in the gymnasium, that will be acceptable to meet the historical requirements of this project.

RESPONSE: We can give general descriptions of light fixtures that may be utilized, however, the actual selection of the light fixtures must be done during the design stage.

38. The RFP shows that parking lot lighting will be required, but does not clarify the extent of the area. Please provide such information.

RESPONSE: In forthcoming Am-0006, Drawing will be revised to show area requiring parking lot lighting.

39. The RFP scope of work for CATV mentions Verizon Media Ventures, but they no longer have the contract to provide the service. The current vendor is Craig Wireless. Please state if you concur with the latter statement.

RESPONSE: Concur.

40. The RFP scope of work states that area lighting shall be as indicated on the RFP drawings. The drawings does not show area lighting requirement. Please provide such information.

RESPONSE: In forthcoming Am-0006, Drawing will be revised to show number of light poles in parking area for bidding purposes. Layout of parking lot lighting must be done during the design stage.

General Questions

41. During the Pre-Solicitation Notices a few months ago, a total of four (4) buildings were noted. The current solicitation now includes only two (2) buildings, (B-549 and B-552) and the requirement for phasing and to maintain the operations of the utilities within the other two (2) buildings (B-550 and B-551). Is there a TIME FRAME that these other two (2) buildings will be occupied? In other words, do we assume that the two (2) buildings must be maintained during the entire duration of the contract? If not, please provide the time period(s) during which the utilities must be maintained.

RESPONSE: Buildings 550 and 551 will be maintained for the entire duration of the contract.

42. Arms Room location. There are three (3) arms room noted in Bldg. 549. All are located at the EXTERIOR of the building. Historical and Physical Security on other Quads require that the Arms Rooms be relocated to the interior of the building. Will this change be required? Will revised layouts be issued? SOW Chapter 2 Functional and Area Requirements par 2-1.1 indicates, "Functional spaces depicted on the RFP Concept Design Drawings have been coordinated with the proper contacts and have been sized and arranged for efficient use and circulation. The Design Build contractors shall incorporate the RFP Concept Architectural Design into their design proposal. The floor plan layout and relationship of functional spaces depicted in the architectural floor plans shall not be deviated from." Please advise.

RESPONSE: See revised SOW, Chapter 2, paragraph 2-1.1 in Am-0005.

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Q19. From Dick Pacific, email dated 7/9/04–

Dick Pacific would like to ask permission to perform a limited (2 to 4 locations) scan of the existing suspended slab to better determine the existing reinforcing location. We would be using the firm in the attached website that would be using a radar scanner. The website further explains the methodology. We would propose scanning areas in the interior open corridor and would expect practically no inconvenience to the existing users. The entire process would be completed in less than a day.

RESPONSE: Yes.

Q20. From Nan, Inc., RFI #3, dated 7/8/04–

Section 01900, page 13, par. 1.12.2 Phasing, indicates phasing requirements for buildings **NOT** identified in Quad E. Please clarify any phasing requirements since only Buildings 549 and 552 are in this contract.

RESPONSE: Section 01900, page 13, par 1.12.2 has been revised. See Am-0005. There are no phasing requirements in this project.

Q21. From Dick Pacific, RFI # 17, dated 7/14/04

Please clarify the phasing called for in section 01900 paragraph 1.12.2 of the General Requirements, it appears to reference a previous project.

RESPONSE: Section 01900, paragraph 1.12.2 has been revised. See Am-0005.

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Q22. From Dick Pacific, RFI #16, dated 6/21/04 –

Please clarify if our understanding of the window performance requirements are correct. On page SOW 6-4 section 6-5.4 states “New windows shall meet the requirements of UFC 4-010-01”. Upon reviewing the UFC we would like clarification of the following two sections of these requirements specifically B-3.1.2.1 Frame member design. This section states that 1 psi is the expected design load. Section B-3.1.2.3 states that for connection design to surrounding walls and roof the expected design load is 4.4 psi for windows between 10.8 sf and 32 sf. Our interpretation of these two sections is that we have a window frame and its internal connections that are designed to a criteria of 1 psi in accordance with Section B-3.1.2.1. Any external connections between the window frame assembly to walls and roof are to be designed to resist 4.4 psi in accordance with Section B-3.1.2.3.

RESPONSE: Concur.

Q23. From Commercial Electric, Inc. RFI #1, 7/9/04

1. Section 9-2 – Telecommunications Premises Dist. Sys. – There is nothing listed in the RFP for the cable tray for the telecommunications system at Building 549. Does DOIM standards require cable tray to be installed for the telecommunications system?

RESPONSE: Cable trays are not required.

2. Section 9-4.21 – Area Lighting – There is nothing shown on the RFP drawings for the area lighting.

RESPONSE: See revised drawings in Am-0006.

3. Section 9-4.22 – Modifications to Existing Parking Lot Lighting – There is nothing shown on the RFP drawings for the modifications to the existing parking lot lighting.

RESPONSE: See revised drawings in Am-0006.

4. Section 904.23 – AFTP Access Controls – There is nothing shown on the RFP drawings for the general lighting, electrical power, and signals for the new AFTP access controls.

RESPONSE: The access controls are a part of the design and should follow AFTP guidelines.

5. Section 9-4.24 – Multipurpose Court Lighting – There is nothing shown in the RFP drawings for the multipurpose court lighting.

RESPONSE: See revised drawings in Am-0006.

Q24. Email from Cynthia Yamauchi, dated 7/21/04 -

Amendment #5: Option: 3. Sergeant Smith Theater parking lot. Are there any pavement markings required for this parking lot? If so, is there a sketch of the lot?

RESPONSE: See revised drawings in Am-0006.

SECTION 00900
RESPONSES TO QUESTIONS
SUBMITTED BY PLANHOLDERS
FOR
SOLICITATION NO. W9128A-04-R-0012

Q25. From Dick Pacific, RFI #18, dated 7/21/04 –

1. We are reviewing amend 005 and are unable to see how it answered our previous Q16 part 3 as stated on page A-10 of section 00900.

RESPONSE: See Am-0006. Eliminated occupant load requirement based on number of lockers in room. Egress requirements still shall be in accordance with NFPA 101.

2. Will a drawing be issued defining the Sgt. Smith Theater Parking Lot mentioned as Optional on the bid form.

RESPONSE: See revised drawings in Am-0006.

Q26. From Dick Pacific, RFI #19, dated 7/21/04 –

SOW 5-5 para 5-4.9.5.3 is referring to the hardware for the door opening SF2 Lanai from Unit. It is our suppliers opinion that there is a conflict with a note on sheet A2.2 & A2.3 referring to the same opening “ALL UNIT DOORS LEADING TO LANAI SHALL HAVE KEY OPERATED HARDWARE FROM BOTH SIDES. Please clarify which direction we are to follow.

RESPONSE: See revised SOW in Am-0006.

CHAPTER 2

FUNCTIONAL AND AREA REQUIREMENTS

2-1 GENERAL REQUIREMENTS

2-1.1 Building Functionality. Functional spaces depicted on the RFP Concept Architectural Design Drawings have been coordinated with the proper contacts and have been sized and arranged for efficient use and circulation. The Design Build contractors shall incorporate the RFP Concept Architectural Design into their design proposal. The floor plan layout and relationship of functional spaces depicted in the RFP Concept Architectural Design Drawings serves as a guide only. During Design Development, the selected Design Build contractor shall incorporate any changes to the floor plan layout into their documents as approved by the Contracting Officer at no additional cost to the contract. All architectural criteria must be met and accounted for, see paragraph 5-2 Applicable Codes and Standards.

2-1.2 Gross building area definition. Gross building area is measured to the outside face of exterior enclosure walls. Gross area includes floor areas, penthouses, mezzanines, and other spaces as follows:

2-1.2.1 Areas calculated as half space. Gross area includes one-half the area of exterior covered areas such as balconies, entries, loading platforms, breezeways, exterior corridors, and porches. Exterior covered areas are measured from the face of the enclosure wall to the edge of the covered area served. Open Stairs count as half space for each floor they serve.

2-1.2.2 Excluded space. The following spaces are excluded from gross area calculations: Attic areas where average clear height does not exceed 2.13m [7 feet]; crawl spaces; exterior uncovered loading platforms; open courtyards; normal roof overhangs and soffits for weather protection; uncovered ramps and steps; utility tunnels; raceways; mechanical equipment platforms and catwalks.

2-1.3 Gross area limitations. Refer to RFP Concept Design Drawings for gross building area limitations for this RFP. Proposals shall not exceed authorized gross area limitations.

2-1.4 Net area definition. Net area is measured to the inside face of the room or space walls.

2-1.5 Net Area Requirements. Refer to RFP Concept Design Drawings for net area requirements for programmed spaces included in this chapter. The space is sized to accommodate the required function, comply with code requirements, and other requirements of the RFP.

2-1.6 Finish Requirements. Room finishes stated in the following paragraphs are minimums.

2-1.7 Furniture Requirements. The contractor is required to work with the customer to develop a Comprehensive Interior Design Package (CID) for Buildings 549 and 552 of Quad E. Refer to SOW Chapter 14 for CID requirements. A Furnishings/Fixtures/Equipment (FF&E) paragraph description has been provided for each space for each of Buildings 549 and 552 of Quad E, (i.e. paragraphs 2-2.1.1.2, 2-2.1.2.2, 2-2.1.3.2, etc...). These paragraphs determine which items are Government furnished and installed or Contractor furnished and installed. The contractor is required to work with the customer to determine specific furniture criteria such as acceptable materials, finishes and quality levels. The number and location of furnishings serve as an indicator of the number of power, data and communications connection points. See electrical section for more detail. The Furnishings described in the FFE paragraph for all spaces in Chapter 2 are for information only and is a starting point for the CID discussion purposes between the customer and the successful contractor.

2-1.7.1 The contractor is not required to purchase the Furnishings (tables, chairs, sofa, bed, etc.) for the programmed spaces unless noted otherwise. Also, the contractor is not required to provide equipment that is not installed (refrigerator, microwave, washer, and dryer).

2-2 BUILDING 549 - COMPANY OPERATIONS FACILITIES FUNCTIONAL AND AREA REQUIREMENTS. RFP Concept Design Drawings is separate and is included with this Specification Manual to describe the complete scope of work for this project. The company operations facilities (COF)

building(s) shall consist of administrative areas, heavy equipment storage and light equipment storage for each company, support spaces, and common locker/shower facilities for one medium and two small Company Operations Facilities (COF). COF functions and areas that occur in Building 549 shall be as follows:

2-2.1 COF Administrative Areas. One group of administrative areas per company. Company leadership will manage the organization, receive visitors, and conduct day-to-day business from the COF administrative areas. Entrance shall be separate and distinct from the entrances to company light equipment storage areas and to COF administrative areas. Each COF Administrative area shall be provided with a Company Identification Sign (5 total) see paragraph 5-8.2.6. Military personnel will staff the facility. The following areas for each company is required:

2-2.1.1 Company Commander Office (CO OF). One per company located on the second floor. Room shall be accessed through the Admin Office. Occupants: 1, and occasional visitors.

2-2.1.1.1 Function: Private office for commanding officer.

2-2.1.1.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: one desk with return, one credenza, one bookcase, two legal-size four-drawer file cabinets, one conference table, four side chairs, and one desk chair.

2-2.1.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.1.4 Other requirements: Provide 914 mm 3'-0" wide door into room. Room shall have exterior window.

2-2.1.2 Executive Officer Office (XO OF). One per company located on the second floor. Room shall be accessed through the Admin Office. Occupants: 1, and occasional visitors.

2-2.1.2.1 Function: Private office for the company executive officer.

2-2.1.2.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair and one desk chair.

2-2.1.2.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.2.4 Other requirements: Provide 914 mm 3'-0" wide door into room. Room shall have exterior window.

2-2.1.3 First Sergeant (1SG OF). One per company located on the second floor. Room shall be accessed through the Admin Office. Occupants: 1, and occasional visitors.

2-2.1.3.1 Function: Private office for the company first sergeant (highest ranking non-commissioned officer).

2-2.1.3.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, two side chairs and one desk chair.

2-2.1.3.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.3.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-2.1.4 Training Officer (TNG OF). One per company located on the second floor. Room shall be accessed through the Admin Office. Occupants: 1, and occasional visitors.

2-2.1.4.1 Function: Private office for the company Training Officer.

2-2.1.4.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, two side chairs and one desk chair.

2-2.1.4.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.4.4 Other requirements: Provide 914 mm [3'-0"] wide door into room. Exterior window is desirable.

2-2.1.5 Non-commissioned Officer in Charge (NOIC). One per company located on the second floor. Room shall be accessed through the Admin Office. Occupants: 1, and occasional visitors.

2-2.1.5.1 Function: Private office for non commissioned officer.

2-2.1.5.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, two side chairs and one desk chair.

2-2.1.5.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.5.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-2.1.6 Admin Office (ADMIN). One per company located on the second floor, including interior circulation. Room shall be accessed through the Waiting Area. Occupants: 2 clerks, and occasional visitors.

2-2.1.6.1 Function: Office for company administrative clerks, storage of files, access to private offices. Clerks will have visual control of waiting area and conference room door.

2-2.1.6.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: two clerk desks with returns and desk chairs. The following items will be Contractor furnished and installed: reception desk (built-in casework), as indicated on the concept design drawings separating the Admin Office from the Waiting Area. The counter on the Waiting Area side shall be 1016 mm high x 305 mm deep. Admin side of reception desk shall be at desk height, and shall accommodate computer and monitor (not in contract), and writing area. Provide task lighting at all writing surfaces. Provide built-

in communication and power receptacles or grommets in desk top to access wall receptacles. Desk shall have knee space and minimum two cabinets with hinged doors, and two drawers. Drawers and cabinets shall have keyed locks. Desk components shall have plastic laminate countertop, drawer, and door fronts. Provide a floor anchor for one GFGI security safe. Coordinate anchor location with furniture layout; refer to paragraph 5-7.2.8.

2-2.1.6.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.6.4 Other requirements: Provide 914 mm [3'-0"] wide entry door into room from Waiting Area.

2-2.1.7 Administrative Area Corridor. Circulation to building spaces shall comply with applicable code egress requirements. Unless otherwise required, administrative area corridor shall be capable of being secured from exterior entrances and from any adjacent public, unsecured corridors.

2-2.1.7.1 Function: Circulation and means of egress.

2-2.1.7.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: one handicap accessible electric water cooler; fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes.

2-2.1.7.3 Finishes:

Floor: vinyl composition tile.

Base: resilient cove base.

Walls: impact resistant gypsum wallboard with painted finish.

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.8 Administration Storage (STOR). One per company located on the second floor. Room shall be accessed from the Administration area.

2-2.1.8.1 Function storage for folding tables, display easels, etc.

2-2.1.8.2 Furnishings/Fixtures/Equipment:

2-2.1.8.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.8.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-2.1.9 Waiting Area (WAITING). One per company located area on the second floor, incorporated into the Administrative Area Corridor. Occupants: Two or more visitors; additional visitors (e.g. those waiting to attend a large meeting in the conference room) will wait in the adjacent corridor.

2-2.1.9.1 Function: Waiting and reception area for company soldiers and visitors. Control point for access to admin office and conference room.

2-2.1.9.2 Furnishings/Fixtures/Equipment (FFE): the following items will be government furnished and installed: two side chairs; one 1219 mm high x 1829 mm wide [4'-0" x 6'-0"] wall mounted bulletin board.

2-2.1.9.3 Finishes: Match Administrative Area Corridor.

2-2.1.10 Platoon Office (PLT). Two to Four platoon offices per company located on the second floor as depicted on the RFP Concept Design Drawings. Offices shall be accessed directly from the Administrative Area Corridor, or through a common space that is accessed from the Administrative Area Corridor. Occupants: 1 in each office, and occasional visitors.

2-2.1.10.1 Function: Private office for platoon leaders or other administrators.

2-2.1.10.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: one desk with return, one side chair and one desk chair.

2-2.1.10.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.10.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-2.1.11 Conference Room (CONF). One per company located on the second floor. Room shall be accessed from the Waiting Area (preferable), or through the Admin Office. Admin clerks shall have visual control of Conference Room door. Occupants: up to 22 persons.

2-2.1.11.1 Function: Conference room for company leadership, staff, and visitors. Functions will include staff meetings, hearings, disciplinary sessions, and training.

2-2.1.11.2 Furnishings/Fixtures/Equipment: the following items will be government furnished and installed: tables and chairs for minimum 22 people; one marker board (minimum 2438 mm wide x 1219 mm high [8'-0" x 4'-0"]) and one 2438 mm wide [8'-0"]. The following item will be Contractor furnished and installed: recessed ceiling mounted, motorized projection screen; 2438 mm wide [8'-0"].

2-2.1.11.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.11.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-2.1.12 Conference Room Storage (STOR). One per company located on the second floors. Room shall be accessed from the Conference Room.

2-2.1.12.1 Function: Closet for storage of folding tables, display easels, etc.

2-2.1.12.2 Furnishings/Fixtures/Equipment:

2-2.1.12.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-2.1.12.4 Other requirements: Provide pair 914 mm [3'-0"] wide entry doors.

2-2.1.13 Toilet (TOI). Two private unisex toilet rooms per company located on the second floor COF Administration area. Room shall be sized to comply with handicap accessibility requirements. Room shall be accessed from Administrative Area Corridor.

2-2.1.13.1 Function: Unisex single-occupant toilet, lavatory, and shower; for use by staff and visitors.

2-2.1.13.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: one floor mounted toilet, one wall-hung lavatory, mirror with shelf above lavatory, paper towel dispenser/waste receptacle, soap dispenser, toilet tissue dispenser, one toilet seat cover dispenser; and one ceramic tile shower enclosures and shower fixture and fittings.

2-2.1.13.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile wainscot 1219 mm high with painted water-resistant gypsum board above.

Ceiling: painted gypsum wallboard.

2-2.1.13.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-2.1.14 Janitor Closet (JAN). One per company located on the second floors.

2-2.1.14.1 Function: Service sink and storage of cleaning supplies, soap, and paper products.

2-2.1.14.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: one floor mounted mop sink, mop rack for three mops, and minimum 1524 linear mm of wall mounted stainless steel shelving.

2-2.1.14.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted water-resistant gypsum wallboard.

Ceiling: painted gypsum wallboard

2-2.1.14.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-2.2 COF HEAVY EQUIPMENT STORAGE AREAS. One group of Heavy Equipment Storage areas per company consisting of Equipment Maintenance Area, Arms Vault, and Unit Storage. COF Heavy Equipment Storage Areas are required for one medium and two small Company Operations Facilities (COF). COF Heavy Equipment Storage areas will be used to store, clean, and repair company operational equipment and weapons. Main entrance to Heavy Equipment Storage areas will be from paved service area inside the Quad; service area will be used for loading company equipment on and off of large trucks. Entrance shall be separate and distinct from the entrances to company administrative areas and to other COF Light Equipment Storage areas. Each COF Heavy Equipment Storage Area shall be provided with a Company Identification Sign (5 total), see para. 5-8.2.6. The sign will be located at the exterior wall space adjacent to the entrance. Only able-bodied military personnel will occupy COF supply areas; handicapped accessibility is not required. Heavy equipment storage areas for the COFs will have full height CMU. The following areas for each company are required:

2-2.2.1 Equipment Maintenance Area (EQUIP MAINT). One for each company area on the first floor.

2-2.2.1.1 Function: Equipment cleaning, repair and access to COF storage spaces.

2-2.2.1.2 Furnishings/Fixtures/Equipment: The following items will be Contractor furnished and installed: stainless steel equipment cleaning sinks 711 mm x 711 mm x 172 mm deep [28" x 28" x 6 ¾"], (three sinks), locate near exterior doors. Provide fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes.

2-2.2.1.3 Finishes:

Floor: sealed concrete

Base: none

Walls: painted concrete, or painted concrete masonry unit walls separating COF heavy storage areas.
Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.2.1.4 Other requirements: All entry doors into Equipment Maintenance Area shall have auxiliary deadlocks (thumb turn inside, keyed cylinder outside).

2-2.2.2 Arms Vault (ARMS VAULT). One Arms Vault for each company on the first floor. Construction of Arms Vault shall comply with paragraph 5-7.2. Coordinate with the authority having jurisdiction for specific construction requirements.

2-2.2.2.1 Function: Storage and issue of weapons.

2-2.2.2.2 Furnishings/Fixtures/Equipment: The following items will be Contractor furnished and installed: arms rack and anchor rings on all walls inside Arms Vault; refer to paragraph 5-7.2. Arms racks are not in contract.

2-2.2.2.3 Finishes:

Floor: sealed concrete

Base: none.

Walls: painted concrete, or painted concrete masonry units.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.2.2.4 Other requirements: requirement for dehumidifier.

2-2.2.3 Unit Supply Storage (UNIT SUPPLY). One Unit Supply Storage for each company on the first floor. Provide access from Equipment Maintenance.

2-2.2.3.1 Function: Storage of miscellaneous equipment.

2-2.2.3.2 Furnishings/Fixtures/Equipment: None.

2-2.2.3.3 Finishes:

Floor: sealed concrete

Base: none

Walls: Provide painted concrete masonry units.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.2.3.4 Other requirements: Provide a pair of 914 mm wide hollow metal doors. Doors shall have hold open devices with auxiliary deadlocks (thumb turn inside, keyed cylinder outside).

2-2.3 COF LIGHT EQUIPMENT STORAGE AREAS. One group of Light Equipment Storage areas per company consisting of General Storage, NBC Storage, Comm Storage, Fire Control Storage, and TA-50 Gear Storage. COF Light Equipment Storage Areas are required for five mediums and two small Company Operations Facilities (COF). Individual TA-50 gear lockers shall be provided: minimum 80 lockers for Medium COF and 40 lockers for each Small COF. Each COF Light Equipment storage shall be provided with a Company Identification Sign (5 total), see para. 5-8.2.6. Military personnel will staff the facility. The following areas for each company are required.

2-2.3.1 General Storage (GEN STORAGE). Provide one General Storage for each company located on the second floor.

2-2.3.1.1 Function: Storage of soldier and miscellaneous equipment.

2-2.3.1.2 Furnishings/Fixtures/Equipment: None

2-2.3.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: Provide painted impact resistant gypsum wallboard,

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.3.1.4 Other requirements: Provide pair 914 mm [3'-0"] wide hollow metal doors.

2-2.3.2 Nuclear, Biological and Chemical Equipment Storage (NBC). One NBC Storage for each company on the first floor.

2-2.3.2.1 Function: Storage of equipment for use in defense of nuclear, biological or chemical warfare.

2-2.3.2.2 Furnishings/Fixtures/Equipment: None.

2-2.3.2.3 Finishes:

Floor: sealed concrete

Base: resilient base

Walls: painted gypsum wallboard.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.3.2.4 Other requirements: Provide 914 mm [3'-0"] wide hollow metal door. The walls, doors, floors and ceiling must be constructed to meet Risk Level I requirements as specified in AR 190-51, Appendix B.

2-2.3.3 Communications Storage (COM STOR). One Communications Storage for each company on the first floor.

2-2.3.3.1 Function: Storage of radios and communications field gear.

2-2.3.3.2 Furnishings/Fixtures/Equipment:

2-2.3.3.3 Finishes:

Floor: sealed concrete

Base: resilient base

Walls: painted gypsum wallboard.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.3.3.4 Other requirements: Provide 914 mm [3'-0"] wide hollow metal door. The walls, doors, floors and ceiling must be constructed to meet Risk Level II requirements as specified in AR 190-51, Appendix B.

2-2.3.4 TA-50 Gear Storage (TA-50 GEAR). One TA-50 Gear Storage for each company located on the second floor. Size and configure area to accommodate as many TA-50 locker units per company (allow minimum 2438 mm [8'-0"] clearance between parallel rows of lockers; minimum 914 mm [3'-0"] between open locker doors and obstructions). These quantities shall be verified with the Company Commanders.

2-2.3.4.1 Function: Gear lockers for storage of individual soldier's TA-50 field gear.

2-2.3.4.2 Furnishings/Fixtures/Equipment: The following items will be Contractor furnished and installed: TA-50 gear lockers; lockers size: minimum 559 mm (w) x 914 mm (d) x 1067 mm (h) [22"w x 36"d x 42"h]. Lockers shall be stacked two high.

2-2.3.4.3 Finishes:

Floor: sealed concrete

Base: resilient base.

Walls: impact resistant gypsum board wallboard separating TA-50 Storage from adjacent COF spaces.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.3.4.4 Other requirements: Provide a pair of 914 mm [3'-0"] wide hollow metal doors.

2-2.3.5 Fire Control (FR CNT). One Fire Control Room for each company on the first floor.

2-2.3.5.1 Function: Storage

2-2.3.5.2 Furnishings/Fixtures/Equipment: None.

2-2.3.5.3 Finishes:

Floor: sealed concrete

Base: resilient base.

Walls: painted gypsum wallboard

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.3.5.4 Other requirements: Provide 914 mm [3'-0"] wide entry door. The walls, doors, floors and ceiling must be constructed to meet Risk Level II requirements as specified in AR 190-51, Appendix B.

2-2.4 BUILDING 549 SUPPORT AREAS. Only able-bodied personnel will occupy these support areas; handicapped accessibility is not required, except that stairs and corridors shall comply with handicapped accessibility requirements of applicable codes.

2-2.4.1 Mechanical Room(s) (MECH). Dedicated areas for mechanical equipment located on the first and second floors of Building 549. Each company shall have independent operation and control of HVAC system for its own spaces, but mechanical equipment may serve more than one company, and mechanical rooms may be combined. Mechanical rooms shall not be used for storage or other purposes. Access will be limited to authorized personnel. Provide floor openings and vertical shaft spaces as necessary.

2-2.4.1.1 Function: Spaces for HVAC, water heating, and other plumbing and mechanical equipment.

2-2.4.1.2 Furnishings/Fixtures/Equipment: None.

2-2.4.1.3 Finishes: Floor: sealed concrete

Base: resilient cove base

Walls: painted impact resistant gypsum board.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.4.1.4 Other requirements: Doors shall have storeroom function lockset master-keyed to existing system.

2-2.4.2 Mechanical Central Plant (CENTRAL PLANT) A dedicated area for mechanical central plant on the first floor of Building 549.

2-2.4.2.1 Function: Mechanical Room for HVAC and hot water equipment including, but not limited to, equipment as indicated and in the Statement of Work

2-2.4.2.2 Furnishings/Fixtures/Equipment: As required by Statement of Work and as indicated. Concrete floor slab shall be of sufficient strength and be designed for the equipment provided.

2-2.4.2.3 Finishes:

Floor: sealed concrete; non-slip coating.

Base: none

Walls: painted concrete masonry units

Ceiling: exposed to structure, paint.

2-2.4.2.4 Other requirements: Provide adequate drainage away from building.

2-2.4.3 Electrical Room(s) (ELEC). Dedicated areas for electrical equipment located on the first and second floors of Building 549. Each company shall have independent metering and control of the electrical system for its own spaces, but electrical equipment may serve more than one company, and electrical rooms may be combined. Electrical rooms shall not be used for storage or other purposes. Access will be limited to authorized personnel. Provide floor openings and vertical shaft spaces as necessary.

2-2.4.3.1 Function: Spaces for electrical equipment.

2-2.4.3.2 Furnishings/Fixtures/Equipment: None.

2-2.4.3.3 Finishes: Floor: sealed concrete

Base: resilient cove base

Walls: painted gypsum wallboard or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.4.3.4 Other requirements: Electrical service to buildings shall be underground. Doors shall have storeroom function lockset master-keyed to existing system.

2-2.4.4 Telecommunication Room (TELE). Dedicated interior room(s) for communication distribution equipment located on the first and second floors of Building 549. Room(s) shall be dedicated to one company, and shall not be combined with mechanical or electrical rooms. Access will be limited to authorized personnel. Each company requires one main communication room on the first floor; minimum size 3048 mm [10'-0"] x 3353 mm [11'-0"]. Provide secondary communication room for each company on the second floor. Minimum dimensions of secondary communication rooms shall be 2134 mm [7'-0"] x 3048 mm [10'-0"]. Provide floor openings and vertical shaft spaces as necessary. All spaces having telephone or computer data outlets shall be located to allow a maximum cable length of 90 m [295 feet] between outlet and communication room

2-2.4.4.1 Function: Telephone and data network support spaces for the COF.

2-2.4.4.2 Furnishings/Fixtures/Equipment: None.

2-2.4.4.3 Finishes: Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.4.4.4 Other requirements: Provide minimum 914 mm [3'-0"] wide door with storeroom function lockset master-keyed to existing system.

2-2.4.5 Exterior Stairs. Allows circulation to upper floor of the building. Comply with applicable code egress requirements. This description covers all Exterior Stairs at for Buildings 549.

2-2.4.5.1 Function: Circulation and means of egress.

2-2.4.5.2 Furnishings/Fixtures/Equipment (FFE): None.

2-2.4.5.3 Finishes: Landing floor: sealed concrete with slip-resistant finish texture.

Base: exterior wall material

Treads: Sealed concrete with slip-resistant nosing

Risers: sealed concrete

Walls: exterior wall materials

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.4.5.4 Other requirements: Stairs shall comply with handicap accessibility requirements of applicable codes. Railing shall be designed in accordance with applicable codes. Refer to Chapter 5 for hardware and security requirements for exterior doors.

2-2.4.6 Breezeway (BREEZEWAY). Occurs on the first floor of Building 549. Refers to an unair-conditioned, covered corridor space that is enclosed on the long sides, but open to the exterior on the ends. The Breezeway is required to allow circulation to building spaces and comply with applicable code egress requirements.

2-2.4.6.1 Function: Circulation and means of egress.

2-2.4.6.2 Furnishings/Fixtures/Equipment (FFE): Provide mechanical and electrical systems to comply with applicable codes. All fixtures and equipment shall be suitable for exterior locations. The following item shall be Contractor furnished and installed: provide fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes.

2-2.4.6.3 Finishes:

Floor: sealed concrete

Base: Exterior wall material

Walls: Exterior wall material

Ceiling: painted exterior gypsum soffit board.

2-2.4.6.4 Other requirements: With the exception of fire sprinkler systems, no piping, conduit or ductwork shall be exposed in breezeway. Provide slip resistant finish texture on concrete floor.

2-2.4.7 Exterior Corridor (LANAI). Refers to an unair-conditioned, covered circulation space that is enclosed on one long side (adjacent to the building), and has a guardrail on the other side. Allow circulation to building spaces. Exterior corridor shall comply with applicable code egress requirements. Exterior corridors serve as a link with the stairs and other circulation components.

2-2.4.7.1 Function: Circulation and means of egress.

2-2.4.7.2 Furnishings/Fixtures/Equipment (FFE): Provide mechanical and electrical systems to comply with applicable codes. The following items will be Contractor furnished and installed: fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes. All fixtures and equipment shall be suitable for exterior locations.

2-2.4.7.3 Finishes:

Floor: sealed concrete

Base: Exterior wall material

Walls: Exterior wall material

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-2.4.7.4 Other requirements: Handicap accessible. With the exception of fire sprinkler systems, no piping, conduit or ductwork shall be exposed in exterior corridor. Provide slip resistant finish texture on concrete floor. Guardrails shall be designed in accordance with applicable codes.

2-2.5 Common Locker/Shower Facilities (MEN TOILET/SHOWER) (WOMEN TOILET/SHOWER). There shall be one group of men's and one group of women's common locker/shower facilities shared by the COFs in Building 549. The first floor, of Building 549 shall have two (2) COF Toilet/Shower. Quantities of lockers and plumbing fixtures for men and women vary by shared Companies size. Provide the quantity of lockers and fixtures for the shared Small and Medium Company Operations Facilities on the first and second floor of Building 549 and as indicated in the table below. Soldiers will use locker rooms before and after physical training. Handicapped accessibility is not required. Additional entrances may be provided from a common public corridor in the COF. Entrances shall be separate and distinct from the entrances to company supply and administrative areas. Entrance vestibules shall be provided. Entrances shall provide visual privacy into the spaces.

Table 2-2.5 Locker Room Plumbing Fixture and Locker Quantities

	MEDIUM COMPANY		SMALL COMPANY	
	MEN	WOMEN	MEN	WOMEN
Lockers	82	8	34	8
WC	2	1	2	1
Urinals	1	-	1	-
Lavatories	2	1	1	1
Showers	5	1	4	1

2-2.5.1 Women's Locker Room. Provide one or more rooms, sized to accommodate the number of lockers and plumbing fixtures required for the shared Companies served. **Provide entrance(s) with vestibule. For egress purposes, the occupant load shall be equal to the code determined number of occupants calculated by multiplying room area x the occupant load factor.**

2-2.5.1.1 Function: Toilets, showers and lockers for female soldiers.

2-2.5.1.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: floor mounted toilets, wall-hung lavatories, and ceramic tile shower enclosures in the quantities indicated in the table above. Provide toilet partitions at each toilet. Provide the following toilet accessories: one mirror with shelf above each lavatory; one paper towel dispenser/waste receptacle per two lavatories (or fraction thereof); one soap dispenser per lavatory; one sanitary napkin disposal per toilet; one toilet tissue dispenser per toilet; one toilet seat cover dispenser per toilet; one soap holder per shower; one shower curtain and rod at each shower; two double pin robe hooks at each dressing compartment; one robe hook on each toilet partition door; one sanitary napkin and tampon vending machine. Provide 305 mm [1'-0"] of locker room bench per 5 lockers provided. Provide two wall mounted GFCI electric outlets per two lavatories (or fraction thereof); mount adjacent to mirrors. Provide electric water cooler (EWC) at entrance vestibule from exterior. Provide fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes.

2-2.5.1.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile.

Ceiling: painted water resistant gypsum board.

2-2.5.1.4 Other requirements: Provide 914 mm [3'-0"] wide entry door. Locks shall be as specified in paragraph 5-4.9.5.3.

2-2.5.2 Men's Locker Room. Provide one or more rooms, sized to accommodate the number of lockers and plumbing fixtures required for the shared Companies served. Provide entrance(s) with vestibule. **For egress purposes, the occupant load shall be equal to the code determined number of occupants calculated by multiplying room area x the occupant load factor.**

2-2.5.2.1 Function: Toilets, showers and lockers for male soldiers.

2-2.5.2.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: floor mounted toilets, wall-hung lavatories, and ceramic tile shower enclosures in the quantities indicated in the table above. Provide toilet partitions at each toilet. Provide the following toilet accessories: one mirror with shelf above each lavatory; one paper towel dispenser/waste receptacle per two lavatories (or fraction thereof); one soap dispenser per lavatory; one toilet tissue dispenser per toilet; one toilet seat cover dispenser per toilet; one soap holder per shower; one shower curtain and rod at each shower; one double pin robe hook outside each shower; one robe hook on each toilet partition door. Provide 305 mm [1'-0"] of locker room bench per 5 lockers provided. Provide two wall mounted GFCI electric outlets per two lavatories (or fraction thereof); mount adjacent to mirrors. Provide electric water cooler (EWC) at entrance vestibule from exterior. Provide fire extinguishers in semi-recessed fire

extinguisher cabinets to comply with applicable codes.

2-2.5.2.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile.

Ceiling: painted water resistant gypsum board.

2-2.5.2.4 Other requirements: Provide 914 mm [3'-0"] wide entry door. Locks shall be as specified in paragraph 5-4.9.5.3.

2-3 BUILDING 549 - GYMNASIUM FUNCTIONAL AND AREA REQUIREMENTS.

2-3.1 Function: Multi-function space.

2-3.2 Furnishings/Fixtures/Equipment: reuse existing basketball backboards

2-3.3 Minimum Finishes:

Floor: Remove existing wood floor and install new wood floor after floor slab has been reinforced. Finish floor, stripe as directed and seal.

Base: none

Walls: paint existing walls-and decorative wall elements; new seismic work cannot cover existing decorative wall elements. Contractor must incorporate eclectic wall features into the seismic wall design and cannot conceal existing Historic features.

Ceiling: clean and paint existing metal deck and truss roof structure.

2-4 BUILDING 549 - SMALL BATTALION HEADQUARTERS (HQ) FUNCTIONAL AND AREA REQUIREMENTS. One Small Battalion Headquarters (HQ) is located on the third floor of Building 549, with the exceptions that Classroom No. 3 is located on the 2nd floor of Building 549. The Battalion HQ shall consist of administrative areas, classrooms, and support spaces. One elevator is required for Buildings 549. Mechanical and electrical systems must provide the battalion with independent operation and control.

Leadership and staff will manage the organization, receive visitors, and conduct the business of the battalion from the administrative areas (Command section, S-1, S-2, S-3, and S-4). Soldiers will visit the facility to conduct administrative business, or attend training classes. Military personnel will staff the facility; military and non-military personnel will visit the facility to meet with leadership or attend meetings. Although only able-bodied military personnel will be on staff, all spaces except shower rooms, and utility areas (janitor closets, mechanical, electrical, communication, and elevator machine rooms) shall comply with handicapped accessibility requirements, see Chapter 5, paragraph 5-9. Functions and areas are as follows:

2-4.1 Command Section. There shall be one group of offices per battalion, with accompanying administration area and reception area.

2-4.1.1 Commanding Officer (CO). One per battalion. Occupants: 1, and occasional visitors.

2-4.1.1.1 Function: Private office for battalion commanding officer with direct access to Conference Room and private Toilet Room.

2-4.1.1.2 Furnishings/Fixtures/Equipment: The following items shall Government furnished and installed: one desk, one credenza, one bookcase, two legal-size four-drawer file cabinets, one conference table, six side chairs, and one desk chair.

2-4.1.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base
Walls: painted gypsum wallboard
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.1.4 Other requirements: Provide 914 mm [3'-0"] wide door into room and to Conference Room.
Room shall have exterior window.

2-4.1.2 Commanding Officer Private Toilet Room (TOILET) One private toilet room per Commanding Officer Office. Occupants: 1 per toilet room.

2-4.1.2.1 Function: single-occupant toilet and lavatory, for use by Commanding Officer.

2-4.1.2.2 Furnishings/Fixtures/Equipment: The following items will be Contractor furnished and installed: floor mounted toilet and wall-hung lavatory; the following toilet accessories: one mirror with shelf; one paper towel dispenser/waste receptacle; one soap dispenser; one toilet tissue dispenser; one toilet seat cover dispenser, robe hook on door.

2-4.1.2.3 Finishes:
Floor: ceramic tile.
Base: ceramic tile.
Walls: painted gypsum wallboard.
Ceiling: painted gypsum wallboard.

2-4.1.2.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.1.3 Executive Officer (XO). One per battalion. Occupants: 1, and occasional visitors.

2-4.1.3.1 Function: Private office for battalion executive officer.

2-4.1.3.2 Furnishings/Fixtures/Equipment: The following items shall Government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair, and one desk chair.

2-4.1.3.3 Finishes:
Floor: vinyl composition tile
Base: resilient base
Walls: painted gypsum wallboard
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.3.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.1.4 Command Sergeant Major (CSM). One per battalion. Occupants: 1, and occasional visitors.

2-4.1.4.1 Function: Private office for battalion command sergeant major.

2-4.1.4.2 Furnishings/Fixtures/Equipment: The following items shall Government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair, and one desk chair.

2-4.1.4.3 Finishes:
Floor: vinyl composition tile
Base: resilient base
Walls: painted gypsum wallboard
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.4.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.1.5 Duty Officer (DUTY OF). One per battalion. Occupants: 1.

2-4.1.5.1 Function: Duty Officer provides physical security of the building, and visual control of the entrances and lobby, as well as functioning as an information source for visitors.

2-4.1.5.2 Furnishings/Fixtures/Equipment: The following items shall Government furnished and installed: one desk with return, one legal-size four-drawer file cabinet, one side chair, and one desk chair.

2-4.1.5.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.5.4 Other requirements: Provide 914 mm [3'-0"] wide door into room; door shall have glass vision panel.

2-4.1.6 Waiting (WAITING) One per battalion adjacent to the Reception Area and S-1. Occupants: Four or more visitors.

2-4.1.6.1 Function: Waiting area for visitors

2-4.1.6.2 Furnishings/Fixtures/Equipment: The following items will be government furnished and installed: Four side chairs and one magazine table at Bldg 549.

2-4.1.6.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.7 Reception (REC). One per battalion. Command Section shall be accessed through the Reception area.

2-4.1.7.1 Function: Control area for visitors to Command Section.

2-4.1.7.2 Furnishings/Fixtures/Equipment: The following will be government furnished and installed: three systems furniture workstations.

2-4.1.7.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.7.4 Other requirements: Provide 914 mm [3'-0"] wide door into room; door shall have entry function lockset and glass vision panel.

2-4.1.8 Conference Room (CONF). One room at Building 549. The CO Office shall have direct access to a Conference Room. Occupants: up to 26 persons.

2-4.1.8.1 Function: Conference room for battalion leadership, staff, and visitors. Functions will include staff meetings, hearings, disciplinary sessions, and training.

2-4.1.8.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and installed for each conference room: conference table and seating for up to 26 persons. Provide one marker board (minimum 2438 mm wide x 1219 mm high [8'-0" x 4'-0"]). The following item will be

Contractor furnished and installed: recessed ceiling mounted, motorized projection screen; 2438 mm wide [8'-0"].

2-4.1.8.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.1.8.4 Other requirements: Provide 914 mm [3'-0"] wide doors into room.

2-4.1.9 Toilet Room (M) and (W). Two Men and two Women accessible toilet for each Battalion. Occupants: 1 per toilet room.

2-4.1.9.1 Function: single-occupant toilet and lavatory, for use by staff.

2-4.1.9.2 Furnishings/Fixtures/Equipment: The following items will be Contractor furnished and installed: floor mounted toilet and wall-hung lavatory; the following toilet accessories: one mirror with shelf; one paper towel dispenser/waste receptacle; one soap dispenser; one toilet tissue dispenser; one toilet seat cover dispenser, robe hook on door; and toilet seat cover dispenser.

2-4.1.9.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile wainscot 1219 mm high with painted water-resistant gypsum board above.

Ceiling: painted gypsum wallboard.

2-4.1.9.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.2 S-1 Section. One group of offices per battalion. Command Section shall be accessed through the S-1 Clerical/Central Files area.

2-4.2.1 S-1 Officer (S-1 OFF). Two per battalion. Rooms shall be accessed through the S-1 Clerical/Central Files area. Occupants: 1 per office, and occasional visitors.

2-4.2.1.1 Function: Private office for S-1 officer.

2-4.2.1.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed for each office: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair, and one desk chair.

2-4.2.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.2.1.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.2.2 S-1 Clerical/Central Files (S-1). One per battalion. S-1 Clerical/Central Files shall be accessed from the Waiting room. The area shall have direct access to S-1 private offices, and the Reception area. The following items will be Contractor furnished and installed: Provide counter (built-in casework), as indicated in the Concept Design Drawings, separating the Waiting Room from S-1 Cleric/Central Files. The counter on the corridor side shall be minimum 1524 mm [5'-0"] wide x 1016 mm [3'-4"] high x 305 mm [12"] deep. Occupants: 4 staff and occasional visitors.

2-4.2.2.1 Function: Open office area for S-1 admin staff; access to S-1 and Command offices.

2-4.2.2.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: four systems furniture workstations.

2-4.2.2.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.2.2.4 Other requirements: Provide 914 mm [3'-0"] wide door into room. Exterior window is desirable.

2-4.3 Support Operations Office. One group of offices per battalion.

2-4.3.1 Support Operations Office (SPO OFF). Two per battalion. Rooms shall be accessed through the SPO Open Office area. Occupants: 1 per office and occasional visitors.

2-4.3.1.1 Function: Private office for SPO officer.

2-4.3.1.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed for each office: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair, and one desk chair.

2-4.3.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.3.1.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.3.2 Support Operations Open Office (SPO). One per battalion. Occupants: Minimum 9 staff at Building 549 and minimum 4 staff at Building 550 with occasional visitors.

2-4.3.2.1 Function: Open office area for SPO admin staff.

2-4.3.2.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: one systems furniture workstations for each staff member.

2-4.3.2.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.3.2.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.4 S-2 SECTION. One group of offices per battalion.

2-4.4.1 S-2 Officer (S-2 OF). One per battalion. Room shall be accessed through the S-2 OPS area. Occupants: 1, and occasional visitors.

2-4.4.1.1 Function: Private office for S-2 officer.

2-4.4.1.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair,

and one desk chair.

2-4.4.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard or painted veneer plaster

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.4.1.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.4.2 S-2 OPS area. (S-2 OPS). One per battalion. S-2 OPS shall be accessed from the corridor. The area shall have direct access to S-2 private offices. Occupants: 2 staff, and occasional visitors.

2-4.4.2.1 Function: Open office area for S-2 admin staff; access to S-2 Office.

2-4.4.2.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: two systems furniture workstations.

2-4.4.2.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.4.2.4 Other requirements: Provide 914 mm [3'-0"] wide door into room. Exterior window is desirable. Minimum ceiling height 2642 mm [8'-8"].

2-4.5 S-3 SECTION. One group of offices per battalion.

2-4.5.1 S-3 Officer (S-3 OF). One per battalion. Room shall be accessed through the S-3 Clerical/Central Files area. Occupants: 1, and occasional visitors.

2-4.5.1.1 Function: Private office for S-3 officer.

2-4.5.1.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair, and one desk chair.

2-4.5.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.5.1.4 Other requirements: Provide 914 mm [3'-0"] wide door into room. Exterior window is desirable.

2-4.5.2 S-3 Clerical/Central Files (S-3). One per battalion. The area shall have direct access to S-3 private office and to storage and supplies. Occupants: 10 staff at Building 549 and 7 staff at Building 550, and occasional visitors.

2-4.5.2.1 Function: Open office area for S-3 admin staff; access to S-3 office.

2-4.5.2.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: one systems furniture workstations for each staff member.

2-4.5.2.3 Finishes:

Floor: vinyl composition tile
Base: resilient base
Walls: painted gypsum wallboard
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.5.3 S-3 Storage & Supplies (S-3 SUP). One per battalion. Room shall be under control of, and accessed from, S-3 Clerical/Central Files area.

2-4.5.3.1 Function: Storage of miscellaneous equipment for S-3 Section.

2-4.5.3.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: portable shelving.

2-4.5.3.3 Finishes:
Floor: vinyl composition tile
Base: resilient cove base
Walls: painted gypsum wallboard or
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.6 S-4 SECTION. One group of offices per battalion.

2-4.6.1 S-4 Officer (S-4 OF). Two per battalion. Room shall be accessed through the S-4 Clerical/Central Files area. Occupants: 1 per office, and occasional visitors.

2-4.6.1.1 Function: Private office for S-4 officers.

2-4.6.1.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: one desk with return, one bookcase, two legal-size four-drawer file cabinets, one side chair, and one desk chair.

2-4.6.1.3 Finishes:
Floor: vinyl composition tile
Base: resilient base
Walls: painted gypsum wallboard
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.6.1.4 Other requirements: Provide 914 mm [3'-0"] wide door into room. Exterior window is desirable.

2-4.6.2 Repair and Utilities Office. (R & U). One per battalion. Room shall have two means of access through the S-4 Clerical/Central Files area and from the Hallway. Occupants: 2 per office, and occasional visitors.

2-4.6.2.1 Function: Office.

2-4.6.2.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: two desks with return, two bookcases, two legal-size four-drawer file cabinets, and two desk chairs.

2-4.6.2.3 Finishes:
Floor: vinyl composition tile
Base: resilient base
Walls: painted gypsum wallboard
Ceiling: Suspended acoustic tile ceiling grid system.

2-4.6.3 S-4 Clerical/Central Files (S-4). One per battalion. S-4 Clerical/Central Files shall be accessed from the lobby or corridor. The area shall have direct access to S-4 private offices. Occupants:

8 staff, and occasional visitors.

2-4.6.3.1 Function: Open office area for S-4 admin staff; access to S-4 office.

2-4.6.3.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: eight systems furniture workstations.

2-4.6.3.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.6.3.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.6.4 S-4 Storage & Supplies (S-4 SUP). Minimum one per battalion. Room shall be under control of, and accessed from, S-4/Clerical/Central Files area.

2-4.6.4.1 Function: Storage of miscellaneous equipment for S-4 Section.

2-4.6.4.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: portable shelving.

2-4.6.4.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard or

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.6.4.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.7 Siprnet Room (SIPRNET). One Siprnet Room per battalion. The construction of the Siprnet Room shall be similar to that of the Arms Vault, see paragraph 5-7.2. Coordinate with the authority having jurisdiction for specific construction requirements. See SOW Ch 9 Electrical Systems, para. 9-2.6 for additional requirements regarding this space.

2-4.7.1 Function: Telecommunications vault for classified information.

2-4.7.2 Furnishings/Fixtures/Equipment: None.

2-4.7.3 Finishes:

Floor: sealed concrete

Base: none.

Walls: painted concrete.

Ceiling: painted concrete.

2-4.7.4 Other requirements: Provide 914 mm [3'-0"] wide hollow metal door into room.

2-4.8 CLASSROOM AREAS. Classrooms shall be accessed from an interior corridor or exterior corridor (Lanai).

2-4.8.1 Small Classroom (CLASSRM NO. 1). Each classroom shall be located to allow access from and interior corridor or exterior corridor (Lanai). Occupants: up to 20 persons in each room.

2-4.8.1.1 Function: Soldier training and other meetings.

2-4.8.1.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and

installed: tables and chairs for up to 15 occupants; one lectern; one marker board (minimum 3658 mm wide x 1219 mm high [12'-0" x 4'-0"]) and one 2438 mm wide [8'-0"]

The following items will be Contractor furnished and installed: Provide recessed ceiling mounted, motorized projection screen; 2438 mm wide [8'-0"]. Coordinate with user and add requirements for cable television outlets, television support brackets, or other equipment.

2-4.8.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.8.1.4 Other requirements: Provide 914 mm [3'-0"] wide doors into room.

2-4.8.2 Medium Classrooms (CLASSRM NO. 2). The classrooms shall be located to allow access from an interior or exterior corridor (Lanai). Occupants: up to 40 persons in each room.

2-4.8.2.1 Function: Soldier training and other meetings.

2-4.8.2.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and installed: tables and chairs for up to 40 occupants; one lectern; one marker board (minimum 3658 mm wide x 1219 mm high [12'-0" x 4'-0"]) and one 2438 mm wide [8'-0"]

The following items will be Contractor furnished and installed: Provide recessed ceiling mounted, motorized projection screen; 2438 mm wide [8'-0"]. Coordinate with user and add requirements for cable television outlets, television support brackets, or other equipment.

2-4.8.2.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.8.2.4 Other requirements: Provide 914 mm [3'-0"] wide doors into room.

2-4.8.3 Classroom Toilet Facilities (M) AND (W). Building 549 - One Men's and one Women's Toilet at the second floor Classroom. Provide the quantity of toilet fixtures as indicated on the drawings and on the table below. Handicapped accessibility is required. Entrance vestibules shall be provided. Entrances shall have visual privacy into the spaces.

Table 2-8.3 Toilet Plumbing Fixture Quantities

	BATTALION HQ	
	MEN	WOMEN
WC	X	X
Urinals	X	-
Lavatories	X	X

2-4.8.3.1 Function: Toilets for male soldiers.

2-4.8.3.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: floor mounted toilets, wall-hung lavatories, and ceramic tile shower enclosures in the quantities indicated in the table above. Provide toilet partitions at each toilet. Provide the following toilet accessories: one mirror with shelf above each lavatory; one paper towel dispenser/waste receptacle per

two lavatories (or fraction thereof); one soap dispenser per lavatory; one toilet tissue dispenser per toilet; one toilet seat cover dispenser per toilet; one soap holder per shower; one robe hook on each toilet partition door. Provide two wall mounted GFCI electric outlets per two lavatories (or fraction thereof); mount adjacent to mirrors.

2-4.8.3.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile.

Ceiling: painted water resistant gypsum board.

2-4.8.3.4 Other requirements: Provide 914 mm [3'-0"] wide entry door. Locks shall be as specified in paragraph 5-4.9.5.3.

2-4.8.3.5 Function: Toilets for female soldiers.

2-4.8.3.6 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: floor mounted toilets, and wall-hung lavatories. Provide toilet partitions at each toilet. Provide the following toilet accessories: one mirror with shelf above each lavatory; one paper towel dispenser/waste receptacle per two lavatories (or fraction thereof); one soap dispenser per lavatory; one sanitary napkin disposal per toilet; one toilet tissue dispenser per toilet; one toilet seat cover dispenser per toilet; one robe hook on each toilet partition door; one sanitary napkin and tampon vending machine. Provide two wall mounted GFCI electric outlets per two lavatories (or fraction thereof); mount adjacent to mirrors.

2-4.8.3.7 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile.

Ceiling: painted water resistant gypsum board.

2-4.8.3.8 Other requirements: Provide 914 mm [3'-0"] wide entry door. Locks shall be as specified in paragraph 5-4.9.5.3.

2-4.8.4 Resource Center (RESOURCE CENTER). Each classroom shall be located to allow direct access from the main corridor with direct egress out of the building. Occupants: up to 20 persons in each room.

2-4.8.4.1 Function: Soldier training and other meetings.

2-4.8.4.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and installed: tables and chairs for up to 20 occupants; one lectern; one marker board (minimum 3658 mm wide x 1219 mm high [12'-0" x 4'-0"]) and one 2438 mm wide [8'-0"]

The following items will be Contractor furnished and installed: Provide recessed ceiling mounted, motorized projection screen; 2438 mm wide [8'-0"]. Coordinate with user and add requirements for cable television outlets, television support brackets, or other equipment.

2-4.8.4.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.8.4.4 Other requirements: Provide 914 mm [3'-0"] wide doors into room.

2-4.8.5 Classroom/Learning Resource Center (CLASSROOM LRC). Each classroom shall be located to allow direct access from the main corridor with direct egress out of the building. Occupants: up

to 40 persons in each room.

2-4.8.5.1 Function: Soldier training and other meetings.

2-4.8.5.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and installed: tables and chairs for up to 40 occupants; one lectern; one marker board (minimum 3658 mm wide x 1219 mm high [12'-0" x 4'-0"]) and one 2438 mm wide [8'-0"]

The following items will be Contractor furnished and installed: Provide recessed ceiling mounted, motorized projection screen; 2438 mm wide [8'-0"]. Coordinate with user and add requirements for cable television outlets, television support brackets, or other equipment.

2-4.8.5.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.9 Message Mail Center (MESSAGE CENTER). Provide one on the third floor for each Battalion.

2-4.9.1 Function: Mail distribution.

2-4.9.1.1 Furnishings/Fixtures/Equipment: The following item will be Contractor furnished and installed: counter (built-in casework), separating the Message Mail Center from the corridor. The counter on the corridor side shall be minimum 1524 mm [5'-0"] wide x 1016 mm [3'-4"] high x 305 mm [12"] deep; provide locking overhead roll-down door to secure the opening when unattended; roll-down door hood shall not be visible from corridor side. Counter material shall be plastic laminate

2-4.9.1.2 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.9.1.3 Other requirements: Provide 914 mm [3'-0"] wide door into room; door shall have entry function lockset and glass vision panel.

2-4.10 Re-Enlist Office (RE-ENLIST). One per battalion. Occupants: 3, and occasional visitors.

2-4.10.1 Function: Office for re-enlistment personnel.

2-4.10.2 Furnishings/Fixtures/Equipment: the following item will be government furnished and installed: three desks with returns, three bookcases, three legal-size four-drawer file cabinets, three side chairs, and three desk chairs.

2-4.10.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.10.4 Other requirements: Provide 914 mm [3'-0"] wide door into room. 2-4.11 Chaplain (CHAPLAIN). One at Building 549. Occupants: 1, and visitors.

2-4.11.1 Function: Private office for Chaplain and visitors.

2-4.11.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and

installed: one desk with return, one bookcase, two side chairs, and one desk chair.

2-4.11.3 Finishes:

Floor: carpet

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.11.4 Other requirements: Provide 914 mm [3'-0"] wide door into room.

2-4.12 Chaplain Reception/Waiting (WAITING). Adjacent and with direct access to the Chaplain's office.

2-4.12.1 Function: waiting area for visitors to Chaplain services.

2-4.12.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: one desk with return, one bookcase, one desk chair, five side chairs, one corner tables, and one magazine rack.

2-4.12.3 Finishes:

Floor: carpet

Base: resilient base

Walls: painted gypsum wallboard

Ceiling: Suspended acoustic tile ceiling grid system.

2-4.13 Battalion HQ Common Areas. The following Common areas of the Battalion HQ are required to be handicapped accessible except the janitor closet and shower rooms.

2-4.13.1 Lobby, Corridors, and Vestibules. Provide as required to allow access to building spaces. Unless otherwise required, minimum width of main corridors shall not be less than 1829 mm [6'-0"]. Corridor width shall comply with applicable egress codes.

2-4.13.1.1 Function: Entry to the facility; egress and circulation through the building.

2-4.13.1.2 Furnishings/Fixtures/Equipment: the following items will be Contractor furnished and installed: wall mounted electric water cooler. Provide mechanical and electrical systems to comply with applicable codes. Provide fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes. Provide interior signage to identify major spaces. Provide one building directory near each main entrance and one building directory near first floor elevator doors. The following item will be Government furnished and installed: Provide one 1219 mm high x 1829 mm wide [4'-0" x 6'-0"] wall mounted bulletin board.

2-4.13.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base.

Walls: painted gypsum wallboard

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.13.1.4 Other requirements: Handicap accessible.

2-4.13.2 Vending Area (VENDING). one area on the third floor for each battalion.

2-4.13.2.1 Function: Space for soft drink and snack vending machines, and ice machine-dispenser.

2-4.13.2.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: one ice cube machine-dispenser designed for hotel ice bucket filling, capable of producing minimum 250 lbs. of regular ice cubes in 24 hours, with 180 lb. Storage; ice machine manufacturer's

automatic cleaning system to clean and sanitize the water distribution system of the machine at scheduled intervals. Ice machine shall be Energy Star compliant; four full-size soft drink and snack vending machines. Vending machines will not require plumbing connections.

2-4.13.2.3 Finishes:

Floor: vinyl composition tile

Base: resilient base

Walls: painted gypsum wallboard.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.13.2.4 Other requirements: Provide electrical power to accommodate vending machines and to comply with applicable codes.

2-4.14.1 Janitor Closet (JAN). One on the third floor. Room shall be accessed from the Hallway.

2-4.14.1.1 Function: Service sink and storage of cleaning supplies, soap, and paper products.

2-4.14.1.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: one floor mounted mop sink, mop rack for three mops, and minimum 1524 linear mm of wall mounted stainless steel shelving.

2-4.14.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted water-resistant gypsum wallboard.

Ceiling: painted gypsum wallboard

2-4.15 BUILDING 549 SUPPORT AREAS. The following areas for the Battalion HQ building are required. Handicapped accessibility is not required in mechanical rooms, electrical and communications closets, and elevator machine room. All other support spaces shall be handicap accessible.

2-4.15.1 Mechanical Room(s) (MECH). Dedicated areas for mechanical equipment located on the third floor. Each battalion shall have independent operation and control of HVAC system for its own spaces, but mechanical equipment may serve more than one battalion, and mechanical rooms may be combined. Mechanical rooms shall not be used for storage or other purposes. Access will be limited to authorized personnel. Rooms shall allow easy equipment removal and maintenance. Provide floor openings and vertical shaft spaces as necessary.

2-4.15.1.1 Function: Spaces for HVAC, water heating, and other plumbing and mechanical equipment.

2-4.15.1.2 Furnishings/Fixtures/Equipment: None.

2-4.15.1.3 Finishes:

Floor: sealed concrete

Base: resilient cove base

Walls: painted gypsum wallboard and painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.15.1.4 Other requirements: Doors shall have storeroom function lockset master-keyed to existing system.

2-4.15.2 Electrical Room(s) (ELEC). Dedicated areas for electrical equipment located on the third floor. Each battalion shall have independent metering and control of the electrical system for its own spaces, but electrical equipment may serve more than one battalion, and electrical rooms may be combined. Electrical rooms shall not be used for storage or other purposes. Access will be limited to authorized personnel. Rooms shall allow easy equipment removal and maintenance.

2-4.15.2.1 Function: Spaces for electrical equipment.

2-4.15.2.2 Furnishings/Fixtures/Equipment: None.

2-4.15.2.3 Finishes: Floor: sealed concrete

Base: resilient cove base

Walls: painted gypsum wallboard or painted veneer plaster, or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.15.2.4 Other requirements: Electrical service to buildings shall be underground. Doors shall have storeroom function lockset master-keyed to existing system.

2-4.15.3 Telecommunication Room (TELE). Dedicated room(s) for communication distribution equipment located on the third floor. Each room shall be dedicated to a single battalion, and shall not be combined with mechanical or electrical rooms. Each battalion shall have one main communication room; minimum size 3048 mm [10'-0"] x 3353 mm [11'-0"]. In two-story buildings, the communication room shall be located on the second floor. Provide additional communication rooms as needed; all spaces having telephone or computer data outlets shall be located to allow a maximum cable length of 90 m [295 feet] between outlet and communication room. Minimum dimensions of secondary communication rooms shall be 2134 mm [7'-0"] x 3048 mm [10'-0"]. Provide floor openings and vertical shaft spaces as necessary. Rooms shall be accessed from corridors. Access will be limited to authorized personnel.

2-4.15.3.1 Function: Distribution areas for telephone, data network, and cable television.

2-4.15.3.2 Furnishings/Fixtures/Equipment: None.

2-4.15.3.3 Finishes: Floor: vinyl composition tile.

Base: resilient cove base

Walls: painted gypsum wallboard, or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.15.3.4 Other requirements: Door shall have minimum 914 mm [3'-0"] wide door with lockset master-keyed to existing system. Provide three 102 mm [4"] empty conduits connecting vertically stacked communication rooms.

2-4.15.4 Elevator (ELEV). One hydraulic passenger elevator for each building.

2-4.15.4.1 Function: Vertical conveyance of people and furniture.

2-4.15.4.2 Furnishings/Fixtures/Equipment: Passenger elevator: 2,500 lb. capacity, minimum 75 feet per minute speed; center opening doors. Refer to Chapter 5 for additional requirements.

2-4.15.4.3 Cab finishes: Floor: vinyl composition tile

Walls: plastic laminate

Ceiling: suspended translucent panel

Car door and front: satin finish stainless steel

Hoistway entrance doors and frame: satin finish stainless steel

2-4.15.4.4 Other requirements: Handicapped accessible.

2-4.15.5 Elevator Machine Room (MACH). One on the first floor of each building. Size to comply with equipment and code requirements.

2-4.15.5.1 Function: Space for hydraulic elevator equipment.

2-4.15.5.2 Furnishings/Fixtures/Equipment: None.

2-4.15.5.3 Finishes: Floor: sealed concrete

Base: resilient cove base

Walls: painted concrete, or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.15.6 Interior Corridor (HALLWAY). Required to allow circulation to building spaces, and comply with applicable code egress requirements. Due to security, climate, and force protection concerns, interior corridors are the preferred means of circulation between living units and other building spaces.

2-4.15.6.1 Function: Circulation and means of egress.

2-4.15.6.2 Furnishings/Fixtures/Equipment (FFE): Provide mechanical and electrical systems to comply with applicable codes. Provide fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes.

2-4.15.6.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base.

Walls: impact resistant gypsum wallboard with painted finish.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-4.15.6.4 Other requirements: Handicap accessible.

2-4.15.7 Exterior Corridor (LANAI). Refers to an unair-conditioned, covered circulation space that is enclosed on one long side (adjacent to the building), and has a guardrail on the other side. It is required to allow circulation to building spaces and comply with applicable code egress requirements. Exterior corridors may be provided to link breezeways with stairs and other circulation components. Exterior corridors shall not be used to provide access to living units

2-4.15.7.1 Function: Circulation and means of egress.

2-4.15.7.2 Furnishings/Fixtures/Equipment (FFE): Provide mechanical and electrical systems to comply with applicable codes. Provide fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes. All fixtures and equipment shall be suitable for exterior locations.

2-4.15.7.3 Finishes:

Floor: sealed concrete

Base: Exterior wall material

Walls: Exterior wall material

Ceiling: painted underside of concrete structure above

2-4.15.7.4 Other requirements: Handicap accessible. Other than the fire sprinkler systems, no piping, conduit or ductwork shall be exposed in exterior corridor. Exceptions to this requirement will be allowed with written approval from the Contracting Officer. Provide slip resistant finish texture on concrete floor. Guardrails shall be designed in accordance with applicable codes.

2-5 BUILDING 552 - UNACCOMPANIED ENLISTED PERSONNEL HOUSING (UEPH) FACILITIES FUNCTIONAL AND AREA REQUIREMENTS. The UEPH building(s) shall consist of living units, common areas, and support spaces that will occupy all three floors of Building 552. Each living unit shall be designed to be occupied by one or two soldiers. It shall have 66 Two-person living units and 18 One-person living units to house a total of 150 enlisted personnel. The one-person living unit Living units and common areas are equally distributed among three floors in Building 552. Only able-bodied military personnel will occupy UEPH Buildings; handicapped accessibility is not required except at the ground floor exterior corridor and ground floor areas accessible to the general public such as the Toilets and Game Rooms. Building spaces and areas shall be as follows:

2-5.1 Areas Comprising the Two-Person Living Unit (1+1 Module). Each Two-Person living unit, or

module, will contain two individual living/sleeping rooms with closets, and a shared service area with Kitchen, and a shared bathroom. Spaces are as follows.

2-5.1.1 Individual Living/Sleeping Room (BEDROOM). Two per module.

2-5.1.1.1 Function: Private bedroom and living space for one enlisted person.

2-5.1.1.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: One twin bed with headboard and footboard 102mm x 2083mm [40" x 85"]; one dresser 712mm wide x 458mm deep x 661mm high [28" x 18" x 26" high]; one nightstand 485mm wide x 435mm deep x 535mm high [19" x 17" x 21" high]; one desk 1524mm wide x 762 deep (with keyboard tray retracted) x 762mm high [60" wide x 30" deep x 30" high]; one desk chair 500mm wide x 535mm deep x 851mm high [19-1/2" x 21" x 33-1/2" high] and one entertainment center 914 mm wide x 610 mm deep [36" x 24"].

2-5.1.1.3 Minimum Finishes:

Floor: vinyl composition tile

Base: resilient cove base.

Walls: gypsum wallboard with full-height Interior Textured Acrylic Wall Finish (Duroplex).

Ceiling: painted gypsum wallboard.

2-5.1.1.4 Other requirements: Living/sleeping room shall have at least one exterior operable window with insect screen. Window shall meet egress requirements of NFPA 101 and Unified Facilities Criteria (UFC) 1-200-01 and International Building Code (IBC). Window shall not be located adjacent to an exterior corridor or breezeway. Door between service area and living/sleeping room shall have electronic lockset. Door between public corridor and service area shall have electronic lockset. Provide minimum of one combination telephone/data outlet in each Living /Sleeping room. Provide minimum of one cable television outlet in each Living/Sleeping room. Coordinate outlet locations with furniture arrangement. Refer to Chapter 9 Electrical Systems.

2-5.1.2 Closet (CLOSET). One per living/sleeping room.

2-5.1.2.1 Function: Private walk-in closet for clothing and storage of boxes and field gear.

2-5.1.2.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: rod and shelf, as indicated on the RFP Concept Drawings.

2-5.1.2.3 Minimum Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard

Ceiling: painted gypsum wallboard.

2-5.1.2.4 Other requirements: Door shall have passage function latchset and be equipped with a hasp so the occupant can provide his/her own padlock.

2-5.1.3 Kitchen (KITCHEN). One per module.

2-5.1.3.1 Function: Circulation space, food preparation area, and eating area for occupants.

2-5.1.3.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: one refrigerator-freezer (minimum 9 total cubic feet); one microwave oven (min .9 cubic feet, 800 watts) mounted under wall cabinets, one 762mm [30"] slide-in electric range. The following item will be Contractor furnished and installed: minimum 1500 linear mm [5'-0"] of 600mm [2'-0"] deep kitchen base cabinets and countertop (including range width), and 2100 linear mm [7'-0"] of 300mm [12"] deep wall cabinets. Wall cabinets shall be minimum 600mm [2'-0"] high; provide 600 mm [2'-0"] clear between countertop and bottom of wall cabinets at sink. Base cabinets shall have minimum of two 300 mm [12"] wide drawers; provide plastic laminate countertop with integral side and backsplashes at walls. Provide

single compartment, stainless steel kitchen sink with food strainer/stopper, minimum inside dimensions 400mm x 400mm x 175mm deep [1'-4" x 1'-4" x 7" deep], with chrome-plated, single handle, washerless mixing faucet (refer to Chapter 8); provide fire extinguisher mounted inside base cabinet. One 4-burner electric range hood with exterior exhaust and garbage disposal.

2-5.1.3.3 Minimum Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard; Wall area between countertop and wall cabinets: plastic laminate.

Ceiling: painted gypsum wallboard.

2-5.1.3.4 Other requirements: Door between public corridor and service area (entry door into module) shall have interlocking threshold.

2-5.1.4 Bathroom (BATHROOM). One per module.

2-5.1.4.1 Function: Bathing and toilet facilities for either occupant; storage for both occupants' bath articles.

2-5.1.4.2 Furnishings/Fixtures/Equipment (FFE): All the following items listed will be Contractor furnished and installed: Lavatory that shall be minimum 475mm x 475mm [19" x 19"] self-rimming vitreous china, or cast-filled acrylic or solid surfacing material integrally molded to countertop; provide chrome-plated washerless faucet with pop-up drain (refer to Chapter 8); Countertop shall be minimum 900mm [3'-0"] wide cast-filled acrylic, acrylic solid surfacing material, or plastic laminate with integrally molded, 100mm high coved backsplash. Provide 102mm high side splash at side walls. Provide plastic laminate surfaced vanity base cabinet with hinged door(s) and minimum two 225mm [9"] wide drawers. Provide 6mm [1/4"] thick x minimum 1050mm [3'-6"] high mirror glass, full width of vanity countertop, with wall mounted vanity light fixture above mirror (refer to Chapter 9). Provide one recessed medicine cabinet, two soap holders, and two toothbrush/tumbler holders. Provide floor-mounted toilet with full seat and seat cover (lid). Provide bathtub, chrome-plated brass showerhead, and anti-scald single-handle mixing valve (refer to Chapter 8). Provide two minimum 600mm [2'-0"] long towel bars mounted on walls outside tub/shower enclosure, two wall mounted soap holders in the tub/shower, and one door mounted robe hook with two hooks. Provide wall mounted retractable clothesline across tub/shower. Provide mildew-resistant vinyl shower curtain with stainless steel curtain hooks and chrome-plated brass shower curtain rod. Provide single roll toilet tissue dispenser.

2-5.1.4.3 Minimum Finishes:

Floor: ceramic tile

Base: ceramic tile sanitary cove base

Walls: full height ceramic tile. Walls around shower/tub enclosure shall be full height ceramic tile.

Ceiling: painted water resistant gypsum board.

2-5.1.4.4 Other requirements: HVAC system shall exhaust bathroom air; refer to Chapter 10. Door shall have privacy function lockset.

2-5.2 Areas Comprising the One-Person Living Unit (1+0 TYPE A) (1+0 TYPE B) and (1+0 TYPE C). Each One-Person living unit, or module, will contain a living/sleeping room with closet, a service area with Kitchen, and a bathroom. Spaces are as follows.

2-5.2.1 Living/Sleeping Room (BEDROOM). One per module.

2-5.2.1.1 Function: Private bedroom and living space for one senior enlisted person.

2-5.2.1.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: One twin bed with headboard and footboard 102mm x 2083mm [40" x 85"]; one dresser 712mm wide x 458mm deep x 661mm high [28" x 18" x 26" high]; one nightstand 485mm wide x 435mm deep x 535mm high [19" x 17" x 21" high]; one desk 1524mm wide x 762 deep (with keyboard tray retracted) x

762mm high [60" wide x 30" deep x 30" high]; one desk chair 500mm wide x 535mm deep x 851mm high [19-1/2" x 21" x 33-1/2" high] and one entertainment center 914 mm wide x 610 deep mm [36" x 24".

2-5.2.1.3 Minimum Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: gypsum wallboard with full-height Interior Textured Acrylic Wall Finish (Duroplex).

Ceiling: painted gypsum wallboard.

2-5.2.1.4 Other requirements: Living/sleeping room shall have at least one exterior operable window with insect screen. Window shall meet egress requirements of NFPA 101 and Unified Facilities Criteria (UFC) 1-200-01 and International Building Code (IBC). Window shall not be located adjacent to an exterior corridor or breezeway. Provide minimum of one combination telephone/data outlet on in each Living /Sleeping room. Provide minimum of one cable television outlet in each Living/Sleeping room. Coordinate outlet locations with furniture arrangement. Refer to Chapter 9 Electrical Systems.

2-5.2.2 Closet (CLOSET). One per living/sleeping room.

2-5.2.2.1 Function: Private walk-in closet for clothing and storage of boxes and field gear.

2-5.2.2.2 Furnishings/Fixtures/Equipment (FFE): The following items will be Contractor furnished and installed: rod and shelf, as indicated on RFP Contract Drawings.

2-5.2.2.3 Minimum Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard or painted veneer plaster

Ceiling: painted gypsum wallboard.

2-5.2.2.4 Other requirements: Door shall have passage function latchset and be equipped with a hasp so the occupant can provide his/her own padlock.

2-5.2.3 Kitchen (KITCHEN). One per module.

2-5.2.3.1 Function: Circulation space, food preparation area, and eating area for occupant and visitors.

2-5.2.3.2 Furnishings/Fixtures/Equipment: The following items will be Government furnished and installed: one refrigerator-freezer (minimum 9 total cubic feet); one microwave oven (min .9 cubic feet, 800 watts) mounted under wall cabinets, one 762mm [30"] slide-in electric range. The following item will be Contractor furnished and installed: minimum 1500 linear mm [5'-0"] of 600mm [2'-0"] deep kitchen base cabinets and countertop (including range width), and 2100 linear mm [7'-0"] of 300mm [12"] deep wall cabinets. Wall cabinets shall be minimum 600mm [2'-0"] high; provide 600 mm [2'-0"] clear between countertop and bottom of wall cabinets at sink. Base cabinets shall have minimum of two 300 mm [12"] wide drawers; provide plastic laminate countertop with integral side and backsplashes at walls. Provide single compartment, stainless steel kitchen sink with food strainer/stopper, minimum inside dimensions 400mm x 400mm x 175mm deep [1'-4" x 1'-4" x 7" deep], with chrome-plated, single handle, washerless mixing faucet (refer to Chapter 8); provide fire extinguisher mounted inside base cabinet. One 4-burner electric rangehood with exterior exhaust and garbage disposal.

2-5.2.3.3 Minimum Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard; Wall area between countertop and wall cabinets: plastic laminate.

Ceiling: painted gypsum wallboard.

2-5.2.3.4 Other requirements: Door between public corridor and service area (entry door into module) shall have interlocking threshold.

2-5.2.4 Bathroom (BATHROOM). One per module.

2-5.2.4.1 Function: Bathing and toilet facilities for occupant; storage for occupants' bath articles.

2-5.2.4.2 Furnishings/Fixtures/Equipment (FFE): All the following items listed will be Contractor furnished and installed: Lavatory that shall be minimum 475mm x 475mm [19" x 19"] self-rimming vitreous china, or cast-filled acrylic or solid surfacing material integrally molded to countertop; provide chrome-plated washerless faucet with pop-up drain (refer to Chapter 8); Countertop shall be minimum 900mm [3'-0"] wide cast-filled acrylic, acrylic solid surfacing material, or plastic laminate with integrally molded, 100mm high coved backsplash. Provide 102mm high side splash at side walls. Provide plastic laminate surfaced vanity base cabinet with hinged door(s) and minimum two 225mm [9"] wide drawers. Provide 6mm [1/4"] thick x minimum 1050mm [3'-6"] high mirror glass, full width of vanity countertop, with wall mounted vanity light fixture above mirror (refer to Chapter 9). Provide one recessed medicine cabinet, two soap holders, and two toothbrush/tumbler holders. Provide floor-mounted toilet with full seat and seat cover (lid). Provide bathtub, chrome-plated brass showerhead, and anti-scald single-handle mixing valve (refer to Chapter 8). Provide two minimum 600mm [2'-0"] long towel bars mounted on walls outside tub/shower enclosure, two wall mounted soap holders in the tub/shower, and one door mounted robe hook with two hooks. Provide wall mounted retractable clothesline across tub/shower. Provide mildew-resistant vinyl shower curtain with stainless steel curtain hooks and chrome-plated brass shower curtain rod. Provide single roll toilet tissue dispenser.

2-5.2.4.3 Finishes:

Floor: ceramic tile

Base: ceramic tile sanitary cove base

Walls: full height ceramic tile. Walls around shower/tub enclosure shall be full height ceramic tile.

Ceiling: painted water resistant gypsum board.

2-5.2.4.4 Other requirements: HVAC system shall exhaust bathroom air; refer to Chapter 10. Door shall have privacy function lockset.

2-5.3 BUILDING 552 UEPH COMMON AREAS. Common areas will be shared by soldiers. Spaces are as follows:

2-5.3.1 Game Room (GAME ROOM). Two per floor except one per floor at the first floor of Building 551. Provide area for vending machines and ice machine-dispensers.

2-5.3.1.1 Function: additional space for building occupants to entertain.

2-5.3.1.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and installed: one ice cube machine-dispenser designed for hotel ice bucket filling, capable of producing minimum 250 lbs. of regular ice cubes in 24 hours, with 180 lb. storage; one ice machine manufacturer's automatic cleaning system to clean and sanitize the water distribution system of the machine at scheduled intervals; Ice machine shall be Energy Star compliant; four full-size soft drink and snack vending machines. Vending machines will not require plumbing connections. Game machines. One refrigerator-freezer (minimum 20 total cubic feet); one microwave oven (min 1.0 cubic feet, 850 watts) mounted under wall cabinets and one 30". The following item will be Contractor furnished and installed: minimum 1500 linear mm [5'-0"] of 600mm [2'-0"] deep kitchen base cabinets and countertop (including range width), and 2100 linear mm [7'-0"] of 300mm [12"] deep wall cabinets. Wall cabinets shall be minimum 600mm [2'-0"] high; provide 600 mm [2'-0"] clear between countertop and bottom of wall cabinets at sink. Base cabinets shall have minimum of two 300 mm [12"] wide drawers; provide plastic laminate countertop with integral side and backsplashes at walls. Provide single compartment, stainless steel kitchen sink with food strainer/stopper, minimum inside dimensions 400mm x 400mm x 175mm deep [1'-4" x 1'-4" x 7" deep], with chrome-plated, single handle, washerless mixing faucet (refer to Chapter 8); provide fire extinguisher mounted inside base cabinet. One 4-burner electric cooktop, rangehood with exterior exhaust and garbage disposal.

2-5.3.1.3 Finishes:

Floor: vinyl composition tile.

Base: resilient cove base.

Walls: painted gypsum wallboard,

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.3.1.4 Other requirements: Provide a 914 mm [3'-0"] wide entry door. Provide electrical power to accommodate vending machines, game machines, and to comply with applicable codes.

2-5.3.2 Men's Toilet (M). Two private toilet rooms per floor. Room shall be accessed from Game Room for the Second and Third Floors. Room shall be accessed from the Lanai at the Ground Floor.

2-5.3.2.1 Function: Men's single-occupant toilet and lavatory.

2-5.3.2.2 Furnishings/Fixtures/Equipment (FFE): the following items will be Contractor furnished and installed: one floor mounted toilet, one wall-hung lavatory, mirror with shelf above lavatory, paper towel dispenser/waste receptacle, soap dispenser, one toilet seat cover dispenser; and toilet tissue dispenser.

2-5.3.2.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile wainscot 1219 mm high with painted water-resistant gypsum board above.

Ceiling: painted gypsum wallboard.

2-5.3.2.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-5.3.3 Women's Toilet (W). Two private toilet rooms per floor. Room shall be accessed from Game Room for the Second and Third Floors. Room shall be accessed from the Lanai at the Ground Floor.

2-5.3.3.1 Function: Women's single-occupant toilet and lavatory.

2-5.3.3.2 Furnishings/Fixtures/Equipment (FFE): the following items will be Contractor furnished and installed: one floor mounted toilet, one wall-hung lavatory, mirror with shelf above lavatory, paper towel dispenser/waste receptacle, soap dispenser, one toilet seat cover dispenser; and toilet tissue dispenser.

2-5.3.3.3 Finishes:

Floor: ceramic tile.

Base: ceramic tile.

Walls: ceramic tile wainscot 1219 mm high with painted water-resistant gypsum board above.

Ceiling: painted gypsum wallboard.

2-5.3.3.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-5.3.4 Janitor Closet (JAN). One per floor.

2-5.3.4.1 Function: Service Sink, and storage of cleaning supplies.

2-5.3.4.2 Furnishings/Fixtures/Equipment: the following items will be Contractor furnished and installed: floor mop sink, mop rack for three mops, and minimum 1829 linear mm of wall mounted stainless steel shelving.

2-5.3.4.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base.

Walls: painted water-resistant gypsum wallboard, or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.3.4.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-5.3.5 Laundry Area(s) (LAUNDRY). One per floor. Provide one clothes washer per 12 soldiers, and one clothes dryer per 8 soldiers (round fractional numbers to the next highest whole number). Minimum of one laundry room on each floor of the UEPH facility. Provide minimum five washers and seven dryers in each room.

2-5.3.5.1 Function: Self-service washers and dryers and clothes folding areas for residents.

2-5.3.5.2 Furnishings/Fixtures/Equipment: the following items will be Government furnished and installed: commercial quality clothes washers and dryers (each minimum 2.5 cubic feet capacity), non-coin operation; Stacked dryers are preferred; Appliances shall be Energy Star compliant; two vandal-resistant waiting chairs per each four washers. The room shall accommodate one wall mounted laundry product vending machine in each laundry room.

The following item will be Contractor furnished and installed: minimum 1800 linear mm [6'-0"] of 600 mm [2'-0"] deep base cabinets and countertops for folding clothes; provide one each service sink.

2-5.3.5.3 Finishes:

Floor: quarry tile

Base: quarry tile

Walls: painted water resistant gypsum wallboard, or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.3.5.4 Other requirements: Conceal utilities from view, but provide easy maintenance access; locate utility connections 914 mm [36"] above finish floor, unless otherwise recommended by manufacturer. Provide one floor drain for every four washers; locate outside of traffic area. Provide venting of dryer exhaust as on RFP Concept Drawings with lint catchment system. Lint catchment system shall be designed to be maintained within the Laundry Room. Partitions around laundry rooms shall extend to underside of floor above. Provide 914 mm [3'-0"] wide door(s) into room.

2-5.3.6 Storage (STOR.). Eight per floor.

2-5.3.6.1 Function: storage.

2-5.3.6.2 Furnishings/Fixtures/Equipment

2-5.3.6.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base.

Walls: paint finish

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.3.6.4 Other requirements: Provide 914 mm [3'-0"] wide entry door.

2-5.4 BUILDING 552 UEPH SUPPORT AREAS. Support areas include circulation spaces such as stairs and corridors, mechanical, electrical, and communications spaces. Spaces are as follows:

2-5.4.1 Interior Corridor. (HALLWAY) Provide as required to allow circulation to building spaces, and comply with applicable code egress requirements. Due to security, climate, and force protection concerns, interior corridors are the preferred means of circulation between living units and other building spaces.

2-5.4.1.1 Function: Circulation and means of egress.

2-5.4.1.2 Furnishings/Fixtures/Equipment (FFE): Provide mechanical and electrical systems to comply with applicable codes. The following items will be Contractor furnished and installed: fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes.

2-5.4.1.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base.

Walls: painted finish.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint. Suspended acoustic tile ceiling grid system at Third Floor.

2-5.4.1.4 Other requirements: Handicap accessible.

2-5.4.2 Exterior Corridor (LANAI). Refers to an unconditioned, covered circulation space that is enclosed on one long side (adjacent to the building), and has a guardrail on the other side. Allow circulation to building spaces. Exterior corridor shall comply with applicable code egress requirements. Exterior corridors provide link with stairs and other circulation components. Exterior corridors shall not be used to provide access to living units

2-5.4.2.1 Function: Circulation and means of egress.

2-5.4.2.2 Furnishings/Fixtures/Equipment (FFE): Provide mechanical and electrical systems to comply with applicable codes. The following items will be Contractor furnished and installed: fire extinguishers in semi-recessed fire extinguisher cabinets to comply with applicable codes. All fixtures and equipment shall be suitable for exterior locations.

2-5.4.2.3 Finishes:

Floor: sealed concrete

Base: Exterior wall material

Walls: Exterior wall material

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.4.2.4 Other requirements: Handicap accessible. With the exception of fire sprinkler systems, no piping, conduit or ductwork shall be exposed in exterior corridor. Provide slip resistant finish texture on concrete floor. Guardrails shall be designed in accordance with applicable codes.

2-5.4.3 Exterior Stairs. Required to allow circulation to upper floors of the building, and to comply with applicable code egress requirements. This description covers all Exterior Stairs for Building 552.

2-5.4.3.1 Function: Circulation and means of egress.

2-5.4.3.2 Furnishings/Fixtures/Equipment (FFE):

2-5.4.3.3 Finishes: Landing floor: sealed concrete with slip-resistant finish texture.

Base: Exterior wall material

Treads: Sealed concrete with slip-resistant finish texture. Provide slip-resistant nosing.

Risers: sealed concrete.

Walls: exterior wall materials

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.4.3.4 Other requirements: Stairs shall comply with handicap accessibility requirements of applicable codes. Railings shall be designed in accordance with applicable codes. Refer to Chapter 5 for hardware and security requirements for exterior doors.

2-5.4.4 Mechanical Areas (MECH). Dedicated interior spaces and exterior areas for plumbing, fire protection, and HVAC equipment. Size and locate rooms to allow equipment removal and maintenance. Provide floor openings and vertical shaft spaces as necessary.

2-5.4.4.1 Function: Mechanical support spaces for the UEPH building.

2-5.4.4.2 Furnishings/Fixtures/Equipment: None.

2-5.4.4.3 Finishes:

Floor: sealed concrete

Base: resilient cove base

Walls: painted gypsum wallboard, or painted concrete masonry units

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.4.4.4 Other requirements: Locate air intake and exhaust openings to provide optimum indoor air quality. Roof mounted equipment shall not be used. Provide masonry screen walls with lockable metal access gates around outdoor equipment areas (refer to Chapter 3); comply with force protection standards. Doors shall have storeroom function lockset master-keyed to existing system.

2-5.4.5 Electrical Rooms (ELEC). Dedicated interior spaces and exterior areas for electrical equipment. Rooms shall allow easy equipment removal and maintenance. Provide floor openings and vertical shaft spaces as necessary.

2-5.4.5.1 Function: Electrical support spaces for the UEPH building.

2-5.4.5.2 Furnishings/Fixtures/Equipment: None.

2-5.4.5.3 Finishes:

Floor: sealed concrete

Base: resilient cove base

Walls: painted gypsum wallboard.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.4.5.4 Other requirements: Electrical service to the building shall be underground. Door shall have storeroom function lockset master-keyed to existing system. .

2-5.4.6 Telecommunication Room (TELE). Dedicated interior rooms for communication equipment. Rooms shall allow easy equipment removal and maintenance.

2-5.4.6.1 Function: Telephone and data network support spaces for the UEPH building.

2-5.4.6.2 Furnishings/Fixtures/Equipment: As required by Statement of Work.

2-5.4.6.3 Finishes:

Floor: vinyl composition tile

Base: resilient cove base

Walls: painted gypsum wallboard.

Ceiling: patch existing exposed ceiling to match existing adjacent and paint.

2-5.4.6.4 Other requirements: Communication service to the building shall be underground. Provide minimum 914 mm [3'-0"] wide door with storeroom function lockset master-keyed to existing system. . Provide floor openings and vertical shaft spaces as necessary. Provide a minimum of three 102 mm [4"] diameter empty conduits between vertically stacked communication rooms.

2-5.4.7 Fire Pump Room (FIRE PUMP). One at the first floor of Building 552.

2-5.4.7.1 Function: Room for fire pump equipment including, but not limited to, equipment as indicated.

2-5.4.7.2 Furnishings/Fixtures/Equipment: As required by Statement of Work and as indicated. Concrete floor slab shall be of sufficient strength and be designed for the equipment provided.

2-5.4.7.3 Finishes:

Floor: sealed concrete; non-slip coating.

Base: none

Walls: painted concrete masonry units

Ceiling: exposed to structure, paint.

2-5.4.7.4 Other requirements: Provide adequate drainage.

CHAPTER 5

ARCHITECTURAL DESIGN

5-1 DESIGN GOALS. Overall architectural goals for the Whole Barracks Renewal Brigade Complex QUAD E are to provide a functional, visually appealing campus of facilities that is a source of pride for residents, other facility users, and the installation. This chapter applies to all buildings under this RFP unless specifically noted otherwise.

5-1.1.1 The architectural floor plan is established and approved as shown in the RFP Concept Design Drawings. All architectural criteria must be met and accounted for, see paragraph 5-2 Applicable Codes and Standards. Any changes shall be brought to the attention of the Contracting Officer for resolution in writing.

5-1.1.2 Furnishings, Fixtures and Equipment (FF&E): FF&E is part of this project. Fixtures and Equipment (lighting, plumbing, mechanical equipment, etc.) described for programmed spaces shall be provided by the contractor as part of the base bid. Interior Furnishings (tables, chairs, sofa, bed, etc.) will be Government furnished and installed. Refer to SOW Chapter 2, Furniture Requirements for scope of Furnishings, Fixtures, and Equipment that will be required to be provided by the contractor. Any furniture layout depicted in the RFP concept design drawings will be adhered to and not deviated from without approval of the customer. The number and location of furnishings serve as an indicator of the number of power, data and communications connection points. See electrical section for more detail.

5-1.2 Existing Quad Building Background and New Space Planning Intent
The existing Quad consists of four buildings-three stories each - constructed in 1920. The buildings were originally open sleeping and living spaces and until recently, a mixture of office and living spaces. Only two of the four buildings in this Quad will be renovated under this RFP.

5-1.2.1 Building 549: will provide administrative spaces for one (1) small Battalion Headquarters, one (1) medium Company Operations Facility (COF) and two (2) small Company Operations Facilities (COFs). Areas include equipment maintenance, storages, arm vaults, toilets, showers, lockers, building utility and service areas are on the first floor. Conference rooms, platoon offices, TA-50 gear storage, general storage, offices, training rooms, building utility and service areas are on the second floor. The third floor will be renovated to house a small Battalion Headquarters and classrooms. The existing gymnasium on the third floor will be renovated. An elevator will be installed to provide ADA accessibility to the Battalion Headquarters. Portions of the first floor will house a central mechanical plant for mechanical equipment that serves the entire Quad.

Building 549's total floor area is approximately 6,159 SM.

5-1.2.2 Building 552: will provide barracks facilities for 50 persons per floor or a total of 150 personnel per building. Laundry rooms, game rooms, mechanical rooms, electrical rooms, telecom rooms, and janitor closets will be provided on every floor. Building 552's total floor area is approximately 8,045 SM and is part of the first phase of construction. The central chiller plants air conditioning cooling tower will be located on the roof of Building 552.

5-1.2.3 The selected contractor will be required to demolish all of the existing interior partitions as well as the complete flooring system in the toilet and shower areas. Also, the selected contractor will be required to determine the location of existing partitions with respect to the proposed Concept Design Drawings, in order to remove as required. This may include concrete masonry walls that are not structural. The roofing will also have to be removed. All buildings will require the removal of existing windows and doors and provide a larger opening to install new fenestrations (door & windows) as designed to meet the approval of State Historic Preservation Office (SHPO). Adjacent wall finishes, both interior and exterior shall match the existing surfaces before the new windows are installed. Additionally, all existing plumbing, mechanical and electrical items need to be removed as indicated.

5-1.2.4 The Quad E building renovation design intent is to follow the Department of the Army Facilities Standardization Program for a Standard Company Operations Facility and Battalion Headquarters.

5-1.3 Exterior Design Objectives. Design buildings to enhance the visual environment of the installation. Exterior materials, roof forms, and detailing shall comply with the Installation Design Guide and concept design drawing, and shall be compatible with the immediate local context. Use durable, low-maintenance materials.

5-1.4 Interior Design Objectives. Arrange spaces in an efficient, functional manner. Provide simple circulation schemes that allow easy way finding within buildings. Use durable materials and furnishings that can be easily maintained and replaced. Maximize use of day lighting and operable windows. Use interior surfaces that are easy to clean and light in color; avoid trendy or bright color schemes. Provide telephone/data jacks on multiple walls to allow optional locations for furniture. Structure interior spaces to allow maximum flexibility for future modifications; companies and battalions often change size or mission, requiring reconfiguration of facilities. Refer to SOW Chapter 14-Comprehensive Interior Design for detailed information and CID Package requirements.

5-1.5 Material and Product Selection Criteria. Materials shall meet the requirements of the SOW. The SOW includes a range of specificity: some material requirements are specific (no option); other material requirements allow a range of options. The SOW requirements establish a minimum quality level.

5-2 APPLICABLE CODES AND STANDARDS. Except as specified otherwise in the RFP, design and construction of facilities shall comply with the latest editions (as of the date of the RFP) of the following. Major criteria and references for building design are as listed but not limited to this list. Additional requirements are included throughout the RFP.

5-2.1 National Fire Codes, published by the National Fire Protection Association (NFPA), including NFPA 101 Life Safety Code.

5-2.2 International Building Code (IBC), 2003

5-2.3 Americans With Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG), 1998.

5-2.4 Unified Facilities Criteria (UFC) 4-010-01 Department of Defense Minimum Antiterrorism Standards for Buildings October 8, 2003.

5-2.5 AR 190-11, Physical Security of Arms, Ammunition, & Explosives, Appendix G, para G-1a-e(1-4) dated 12 Feb 98.

5-2.6 American Architectural Manufacturer's Association (AAMA)

5-2.7 Architectural Woodworking Institute, AWI Quality Standards

5-2.8 Builders Hardware Manufacturers Association, ANSI/BHMA

5-2.9 Underwriters Laboratories.

5-2.10 Tile Council of America (TCA) Handbook for Ceramic Tile Installation.

5-2.11 The Schofield Barracks Installation Design Guide (IDG), excerpts of which are included in an appendix to the Statement of Work.

5-2.12 UFC 3-600-01 Design: Fire Protection Engineering for Facilities (17 April 2003)

5-2.13 TI 800-01, Design Criteria, 20 July 1998

5-2.14 UFC 1-200-01, Design: General Building Requirements, July 31, 2002

5-2.15 Department of the Army Facilities Standardization Program, Standard Company Operations Facility, Dated February 1994.

5-2.16 Department of the Army Facilities Standardization Program, Standard Design for Brigade and Battalion Headquarters Facility, Dated August 1995.

5-2.17 AR 190-51, Security of Unclassified Army Property (Sensitive and Nonsensitive), Appendix B.

5-3 IBC OCCUPANCY AND BUILDING TYPE CLASSIFICATIONS.

5-3.1 General. Occupancy classifications, construction types, allowable areas, maximum building heights, and fire separation requirements shall comply with the requirements of the International Building Code. Prior to issuance of the RFP, the design district shall coordinate with the authority having jurisdiction to determine occupancy classifications. Consult with the users to determine the hazard classification of items to be stored in the supply spaces.

5-3.2 Construction: The existing buildings in Quad E are three-story buildings that have concrete and masonry construction. The roof structures are unprotected steel. The building type is Type II-B, non-combustible, non-rated construction.

5-3.3 Occupancy Classification. Building 552 is classified as R-2 occupancies. Building 549 is classified as a mixed occupancy, which include A-3, B and S-1 occupancies.

5-3.4 NFPA Classification. The NFPA 101 classification for Buildings 552 is New Apartment Building occupancy. Building 549 is a mixed occupancy.

5-3.5 Barrack Buildings. Occupancy classification: Residential R-2.

5-3.6 Company Operations Facilities Occupancy classification of administrative areas, and locker room facilities: Business Group B. Occupancy classification for supply areas: Storage Group S, Division 1.

5-3.7 Battalion Headquarters. Occupancy classification of administrative areas: Business Group B. Occupancy classification of classroom areas: Assembly Group A-3.

5-4 EXTERIOR DESIGN.

5-4.1 General the buildings are considered historical and any exterior construction shall be sensitive to the original design. See the Historic Narrative for detailed narrative on the historic importance, general design intent and requirements, see SOW 15. The exterior design should closely replicate the original 1920 design. The Concept Design Drawings contrast the original design where the building must conform to NFPA 101, Life Safety Code

5-4.2 Acceptable Materials and Colors. Exterior elements of the facilities shall comply with the attached architectural concept design drawings and the Installation Design Guide (IDG) unless required otherwise by applicable codes or this Statement of Work

5-4.3 Quad Building Superstructure: No specific requirement for the type of structural system is imposed other than to meet the applicable regulations, to dimensionally fit within the space allocated for structure and to accommodate the exterior materials shown on the exterior elevations and building sections.

5-4.4 Detached Building Structures. Concept design is based on a load-bearing masonry exterior wall with a manufactured steel truss roof structure.

5-4.4.1 Alternative pre-cast concrete beams or trusses, pre-engineered steel structure, or conventional steel rafter / purlin systems.

5-4.5 Exterior Closure:

5-4.5.1 Exterior Finishes. Emphasis shall be placed on low maintenance and durability for exterior finish materials. Materials shall be residential in size, scale, and texture. Exterior wall materials shall be painted concrete or concrete masonry unit:

5-4.5.2 Termite decay and protection for exterior wood materials (siding, trims, etc.) shall be in accordance with National Wood Window and Door Association (NWWDA) Standards. Each piece of treated material shall bear identification of the testing agency to indicate performance in accordance with NWWDA.

5-4.5.3 Trim elements. Aluminum or vinyl clad wood trim is preferred over painted or stained wood trim. Painted exterior surfaces shall be minimized. When exterior exposed wood trim is used the following requirements apply:

5-4.5.4 Exposed wood, such as window trim, door sills, window sills, railings and balusters, trellis, wood fencing, arbors, solar shading devices including louvers, arbors, and trellis shall be treated for rot resistance in accordance with NWWDA Industry Standards I.S.4, Water Repellent Preservative Treatment for Millwork.

5-4.5.5 Exterior surfaces requiring painting shall receive a minimum of one prime coat and two finish coats of paint. Wood trim frames, etc., shall be back primed. Exterior semi-transparent low sheen stains, two coats, are acceptable, where appropriate for wood, plywood, etc.

5-4.5.6 Existing exterior stair treads and landings shall be provided with non-slip type treads. Existing exterior stairs shall be provided with metal railings.

5-4.6 Roofs. Roofing material and color shall comply with the attached architectural concept design drawings. Roofing system shall have Underwriters Laboratory (UL) Class A rating for fire resistance, UL 90 wind resistance rating, and Factory Mutual (FM) 1-90 fire and wind resistance rating.

5-4.6.1 Quad Buildings, and Fire Pump Building Roofs. Built-up roofs shall have a minimum pitch of 1:24 (1/2-inch: 1 foot.).

5-4.6.1.1 Built-Up Roofing. Provide 4-ply, built-up roofing on rigid board insulation over existing metal decking for Quad Building Roofs. Provide 4-ply, built-up roofing on rigid board insulation over existing concrete or existing metal decking for Fire Pump Building. Provide manufacturers 20-year finish warranty. Built-up roofing shall have high reflectivity, low emissivity meeting Energy star certification.

5-4.6.2 Roof water. Conductor heads, scuppers and downspouts shall be provided for all roof areas. Provide calculation of gutter and downspout size if the existing conductor heads, scuppers and downspout dimensions cannot be determined. Calculations should be in accordance with SMACNA-03, Architectural Sheet Metal Manual. Downspouts draining onto a lower roof shall have metal or plastic splash deflectors. Downspouts shall be connected to the underground storm drainage system. Provide cast iron boot at the bottom of all downspouts.

5-4.6.3 Rainfall Calculations: Conductor heads, scuppers and downspouts shall be adequately sized to meet the following Design Rainfall Intensities: Schofield Barracks: Design Rainfall Intensity (hourly in inches for a 5-minute period to be expected once in 10 years) = 188 mm (7.4 inches).

5-4.6.4 Roof surface. Roof surfaces shall be light colored to minimize heat gain. Roof water shall be diverted away from entrances and foundations.

5-4.6.5 Roof Eave. Existing Quad Building roof eave shall be removed and restored to its original Historic design and character. Use durable, low-maintenance materials. Refer to Architectural Concept Design Drawings for detail reference.

5-4.6.6 Sheet Metal Work. All Sheet metal material shall be copper.

Note: Flashing - Continuous stepped flashing shall be installed at walls adjacent to roof slope. Design to facilitate easy maintenance and removal of roofing without removing or damaging the wall sidings.

Provide metal drip edge of flashing at roof eaves.

5-4.7 Trim and Flashing. Materials shall comply with the RFP concept design drawings. Gutters, downspouts, and fascias shall be copper; comply with SMACNA Architectural Sheet Metal Manual; provide 20-year manufacturers finish warranty.

5-4.8 Miscellaneous Exterior Elements. Comply with the attached architectural concept design drawings. It is advisable to prohibit any use of exterior wood with painted finish; require pre-finished metal trim. Coordinate with user to include requirements for any building-mounted operational items such as communications antennae, special lighting, warning beacons, etc.

5-4.9 Exterior Doors and Frames.

5-4.9.1 Doors. Provide Historic doors as indicated on the concept design drawings. Refer to RFP concept design drawings for door types and details. Fully glazed doors shall comply with wind load requirements of applicable codes. Telecomm Room doors shall be secured per AR 380-19 Information Systems Security.

5-4.9.4.1 Hollow Metal Doors and Frames. Comply with ANSI A250.8/SDI 100. Doors shall be Level 3, physical performance Level A, Model 2; insulated; top edge closed flush. Frames shall be Level 3, 14 gauge, with continuously welded corners and seamless face joints. Doors and frames shall be constructed of hot dipped zinc coated steel sheet, complying with ASTM A653, Commercial Steel, Type B, minimum A60 coating weight; factory primed. Anchors and accessories shall be zinc coated. Frames in masonry shall have bituminous back-coating, plaster guards, and shall be grouted solid. Provide concealed wall and head anchors in frame sufficient to support the weight of the grouted frame. Provide minimum four concealed wall anchors at masonry rough openings. Provide minimum one concealed head anchor for frame rough openings greater than three feet. Fire-rated openings shall comply with NFPA 80, and the requirements of the labeling authority.

5-4.9.5 Exterior Door Finish Hardware.

5-4.9.5.1 Hinges. ANSI/BHMA A156.1; template, full mortise, heavy duty, anti-friction ball bearing, minimum size 114 mm x 114 mm [4 ½" x 4 ½"], stainless steel, non-removable pins.

5-4.9.5.2 Locksets for Typical Exterior Door. Provide stand-alone programmable electronic door locksets with audit capabilities. The lockset construction shall be all metal, heavy-duty, and mortise. The lockset is equipped with hidden mechanical key override, an anti-pick latch and dead bolt, and a magnetic stripe reader. Each magnetic stripe card will be programmed to gain access into its respective module and sleeping/living rooms. Lockset shall be Kaba Ilco, Solitaire 710-II Series. The lockset shall include knob and lever torque test and "Ultra" finish with two-year warranty.

5-4.9.5.3 **Mortise lock for Typical Exterior Barracks Bedroom or Kitchen to Lanai Doors. Provide mortise lock with function F14 Store/Utility Room Lock. Retracted lever either side. Deadbolt extended or retracted by key either side. This lock is specified to prevent an occupant from locking themselves out on the Lanai.**

Note: This type of hardware is required in accordance with NFPA 101, 7.2.1.5.1. The Lanai is considered as part of the barracks unit and the Lanai door must remain unlocked when the occupant is on the lanai. The maximum travel distance within a dwelling unit to the corridor door shall not exceed 125 feet in buildings protected throughout by an approved, supervised automatic sprinkler system. This was discussed with the HED AHJ on 23 June 2003.

5-4.9.5.4 Locksets for Typical Exterior Utility and Maintenance Doors. spaces with doors covered by this paragraph include: Mechanical Rooms, Electrical Rooms, Telecommunication Rooms, Communication Rooms, Toilets, Janitor, and Stairwell. ANSI/BHMA A156.13; series 1000, grade 1, mortise lockset with removable core, non-ferrous base metal.

5-4.9.5.5 Exit (Panic) Devices. ANSI/BHMA 156.3; heavy-duty touch-pad type, through-bolted mounting. Listed and labeled for panic protection based on UL 305. Doors shall be provided with exit

device if required by Building Code.

5-4.9.5.6 Closers. ANSI/BHMA A156.4; series C02000, Grade 1, hydraulic, factory-sized, adjustable to meet field conditions. Provide for all exterior doors, all doors to living units, and all doors opening to corridors and as required by codes. At exterior doors to lobbies, corridors, mechanical rooms, janitors closets, and COF supply areas provide overhead holders or closers with hold-open capability.

5-4.9.5.7 Auxiliary Hardware. ANSI/BHMA A156.16. Provide wall or floor stops for all exterior doors that do not have overhead holder/stops. Provide solid wood backing in the stud wall cavity for wall-mounted doorstops. Provide other hardware as necessary for a complete installation.

5-4.9.5.8 Thresholds. ANSI/BHMA A156.21; non-ferrous metal. Provide at all exterior doors. Provide inter-locking type threshold for Barracks Building 552 Living Unit only (threshold for Interior corridor door).

5-4.9.5.9 Weatherstripping. ANSI/BHMA A156.22. Provide at all exterior doors.

5-4.9.5.10 Kick Plates. ANSI/BHMA A156.6; stainless steel, 254 mm [10"]high x 51 mm [2"] less than door width. Provide at push side of all doors with closers.

5-4.9.5.11 Locks and keys. Lock cylinders shall have six pin tumblers and interchangeable cores, which are removable by a control key. Provide a master keying system. Locks for each organizational unit, including exterior storage shall be keyed alike. Contractor shall obtain the key bitting report from the hardware manufacturer and provide the report to DPW at the end of the project. Locks and keys shall conform to the standards and requirements of the Builders Hardware Manufacturers Association (BHMA) listed above.

5-4.10 Exterior Windows. Provide Historic windows as indicated on the concept design drawings. Refer to concept design drawings for window types and details. Fully glazed windows shall comply with wind load requirements of applicable codes. All sleeping rooms shall have operable windows complying with egress requirements of applicable codes. Windows shall be operable and shall have locks.

5-4.10.1 Screens. Fiberglass screens shall be provided at all operable windows and be of window manufacturer's standard design. Fiberglass insect screens, 18 x 16 mesh size, shall be provided for all windows and sliding glass doors and should be the window or door manufacturers standard design for use with the windows and doors being provided. Insect screen frames shall be removable type for easy cleaning.

5-4.10.2 Exterior Glass and Glazing. To comply with force protection minimum standards: Single glazing and the inner pane of insulated glass assemblies in exterior windows and doors shall be minimum 6 mm (1/4-inch) annealed laminated glass.

5-4.11 Insulation. Insulation shall be provided to meet the following requirements:

5-4.11.1 Thermal and sound insulation shall have a flame spread rating of 25 or less and a smoke development rating of 50 or less exclusive of the vapor barrier when tested in accordance with ASTM E 84. A vapor barrier shall be provided on the warm side of exterior and ceiling insulation for thermal insulation.

5-4.11.2 Urethane is not allowed as an insulation material.

5-4.11.3 Thermal Insulation. Provide exterior wall, floor, and roof/ceiling assemblies with thermal transmittance (U-values) required to comply with the proposed energy calculations for the facilities. Insulation shall not be installed directly on top of suspended acoustical panel ceilings.

5-4.12 Louvers: Aluminum-framed louvered panels. Louver finish shall be Kynar 500 or approved equal. Kynar 500 properties: a fluoropolymer-polyvinylidene fluoride (PVDF). Finish shall be factory applied and oven baked. Total overall dry film thickness shall be 0.025mm (1mil) thick.

5-4.13 Exterior Railings. All exterior handrails and guardrails shall be replaced. Existing railing

design does not conform to original historic design for Quad E. Design of exterior handrails and guardrails shall conform to historic character of Quad E. The design shall be coordinated with the State Historical Preservation Office. Exterior railing materials, including bolts and fasteners shall be painted hot-dipped galvanized steel. Design shall comply with all applicable codes. Final handrail design shall be approved by DPW.

5-5 INTERIOR DESIGN.

5-5.1 Floors and Flooring Material

5-5.1.1 Floors. Comply with requirements of applicable codes. Non-combustible construction is preferable, even where combustible materials are allowed by code. Floor finish materials shall be as specified in functional and area requirements listed in Chapter 2 of the Statement of Work.

5-5.1.2 Ceramic Tile. Comply with ANSI A 137.1 and the recommendations of Tile Council of America (TCA) Handbook For Ceramic Tile Installation. Provide marble threshold under doors where a ceramic tile floor meets a different floor finish. All grout joints shall be sealed.

5-5.1.3 Vinyl Composition Tile. Vinyl composition tile shall conform to ASTM F 1066, Class 2, through pattern tile, Composition 1, asbestos-free, and shall be 12 inches square and 1/8 inch thick. The tile shall have the color and pattern uniformly distributed throughout the thickness of the tile. Flooring in any one continuous area shall be from the same lot and shall have the same shade and pattern.

5-5.1.4 Resilient Base. Base shall be manufacturers standard rubber, coved style (installed with resilient flooring). Base shall be 4 inches high and a minimum 1/8-inch thick. Job formed corners shall be provided.

5-5.1.5 Carpet. Carpet construction shall be woven; Type: Broadloom 3.6m minimum usable carpet width; Pile Type: Level Loop; Pile Fiber: Commercial 100% branded federally registered trademark nylon continuous filament; Pile Height: minimum 3.4mm in accordance with ASTM D418; Yarn Pile: minimum 2; Pile density: minimum 4696; Dye method: solution dyed; backing material: backing material shall be 100% synthetic material. Static control shall be provided to control static buildup to less than 3.5 kV when tested at 20% RH and 21 degrees C in accordance with AATCC TM 134.

5-5.1.6 Concrete Floors: All concrete floors on the first floor of all Quad E Buildings that will receive vinyl composition tile or carpet shall be provided with hardener/sealer that conforms to the following requirements:

5-5.1.6.1 Qualifications: the installer of hardener/sealer shall be certified and shall be on a list of preapproved applicators of the product.

5-5.1.6.2 Technical Representative: Hardener/sealer manufacturer's Technical Representative shall be made available for initial training of applicators and field observation during installation of the hardener/sealer. Technical Representative shall certify installations for warranty.

5-5.1.6.3 Warranty: Hardener/sealer manufacturer's "Full System 10 year warranty" on the replacement of all flooring material and labor that delaminates due to moisture migration, excessive vapor emissions or contaminates, shall be provided on all concrete floors to receive carpet and resilient flooring.

5-5.2 Interior Walls and Partitions. Comply with requirements of applicable codes. Non-combustible construction is preferable, even where combustible materials are allowed by code. The use of 16 mm [5/8"] Type X gypsum board shall be utilized where drywall partition is required.

5-5.2.1 Offices and Administration areas are to have full height drywall on metal stud partitions with sound insulation. The use of 16 mm [5/8"] Type X gypsum board shall be utilized where drywall partition is required.

5-5.2.2 Interior walls: Masonry or concrete walls at Arms Room, Heavy storage areas for the

Company Operation Facilities (COF) shall have full height masonry or concrete walls.

5-5.2.3 Arms Vault needs to meet requirements at AR 190-11, Physical Security of Arms, Ammunition, and Explosives. Additional Arms Vault requirements are explained in SOW Ch 5, paragraph 5-7.2 and SOW Ch 6, paragraph 6.5-4

5-5.2.4 Interior seismic walls: these walls will be made of concrete. The wall finish shall be smooth; no visible snap-ties or formwork is permitted. These walls will be furred with 64 mm [2-1/2"] metal studs and gypsum board.

5-5.2.5 Metal Support Systems. Non-load bearing metal studs and furring shall comply with ASTM C 645; stud gauge shall be as required by height and loading, but shall not be less than 25 gauge. Maximum stud spacing: 406 mm [16"] on center. Provide galvanized finish.

5-5.2.6 Gypsum Board. Comply with ASTM C 36. Minimum panel thickness: 16 mm [5/8"]. Provide Type X panels in fire-rated assemblies. Provide moisture resistant panels at locations subject to moisture. Provide abuse-resistant panels where indicated in functional and area requirements. Joint treatment: ASTM C 475. Screws ASTM C 646. Drywall installation: ASTM C 840.

5-5.2.7 Ceramic Tile: Comply with ANSI A 137.1 and the recommendations of Tile Council of America (TCA) Handbook For Ceramic Tile Installation. Substrate for wall tile shall be cement backer board (gypsum board is not acceptable).

5-5.2.8 Concrete seismic wall on existing concrete wall: these conditions occur at the exterior facing concrete walls. The finish surface shall be smooth for paint application.

5-5.3 Telecommunication Room (Tele)

5-5.3.1 Require coordination with Schofield Barracks Physical Security Office, Harold Evans, and the Directorate of Information Management, Marion Robinson.

5-5.3.2 Telecommunication rooms that may house SIPR servers shall be treated as classified open storage areas.

5-5.3.3 Security for Telecomm rooms shall be per AR 380-19 information systems security.

5-5.4 Ceilings. Ceiling finish materials shall be as specified in functional and area requirements listed in Chapter 2 of the Statement of Work, as indicated on the Concept Design Drawings, and comply with requirements of applicable codes. Textured ceiling finish may be provided in areas other than laundry or bathrooms. Interior finish on walls and ceilings shall be in accordance with NFPA 101. Provide access doors to maintain and service equipment above the ceiling.

5-5.4.1 Acoustic Ceiling Tile. Acoustic tile shall be smooth, nondirectional finish on scratch-resistance surface. Acoustic tile shall be washable, humidity resistant, and soil resistant. Provide acoustic tile complying with Class A: Flame Spread 25 or under (UL Labeled) per ASTM E 1264; NRC: 0.70 minimum; CAC: 35 minimum; Light Reflect Coefficient: 0.89 minimum.

5-5.4.2 Fiberglass Ceiling Tile. Fiberglass ceiling tile (frp) shall be easy-to-clean panel and made of fiberglass reinforced plastic. Panel surface allows dirt and grease to be cleaned off quickly and easily. As a frp panel it is extremely resistant to most stains and chemicals. The entire panel is moisture resistant and does not support mold or mildew, and it will not rust or corrode. Provided fiberglass tile complying with Class A: Flame Spread 25 or under (UL Labeled) per ASTM E 1264. Light Reflect Coefficient: 0.89 minimum.

5-5.5 Interior Doors and Frames. Provide hollow metal doors, or flush wood solid core doors at UEPH and administration spaces. Provide hollow metal doors at COF supply spaces. All frames shall be hollow metal. Hollow metal doors and frames shall have a minimum A60 galvanizing. Hollow metal frames shall have a minimum of 3 wall anchors and one floor anchor per jamb.

5-5.5.1 Wood Doors. Provide flush wood solid core doors complying with National Wood Window and Door Association (NWWDA) I.S.-1A. Stile edges shall be non-finger jointed hardwood compatible with face veneer. Provide American Woodwork Institute (AWI) Grade A hardwood face veneer for transparent finished doors; provide AWI Sound Grade hardwood face veneer for painted doors. Transparent finished doors are preferred.

5-5.5.2 Hollow Metal Doors. Comply with ANSI A250.8/SDI 100. Doors shall be Level 2, physical performance Level B, Model 2; top edge closed flush, factory primed. Anchors and accessories shall be zinc coated.

5-5.5.3 Hollow Metal Frames. Comply with ANSI A250.8/SDI 100. Frames shall be Level 2, 16 gauge, with continuously welded corners and seamless face joints; factory primed. Anchors and accessories shall be zinc coated. Frames in masonry shall have bituminous back-coating, plaster guards, and shall be grouted solid. All hollow metal doors frames shall be painted (typical).

5-5.5.4 Arms Vault doors and frames needs to meet opening requirements at AR 190-11, Physical Security of Arms, Ammunition, and Explosives. Additional Arms Vault Door and Frame requirements are explained in SOW Ch 5, paragraph 5-7.2.

5-5.5.5 Telecom Room doors and frames to meet opening requirements for Secret-rated work.

5-5.5.6 Fire-rated and Smoke Control Doors and Frames. Comply with International Building Code (IBC), NFPA 80, and requirements of labeling authority. Doors and frames shall bear labels from Underwriters Laboratories (UL), Factory Mutual Engineering and Research (FM) or War. Comply with positive pressure testing requirements of IBC.

5-5.6 Interior Door Finish Hardware.

5-5.6.1 Hinges. ANSI/BHMA A156.1; template, full mortise; Grade 1, ball bearing on doors with closers; Grade 2, bearing on doors without closers. Minimum 114 mm x 114 mm [4 ½" x 4 ½"], stainless steel metal.

5-5.6.2 Locksets for Typical Interior Door. Provide stand-alone programmable electronic door locksets with audit capabilities. The lockset construction shall be all metal, heavy-duty, and mortise. The lockset is equipped with hidden mechanical key override, an anti-pick latch and dead bolt, and a magnetic stripe reader complying with ISO standards and ABA dimensional specifications. Each magnetic stripe card will be programmed to gain access into its respective module and sleeping/living rooms. Lockset shall be Kaba Ilco, Solitaire 710-II Series. The lockset shall include knob and lever torque test and "Ultra" finish with two-year warranty ANSI/BHMA A156.13; mortise lockset with removable core; non-ferrous base metal.

5-5.6.3 Locksets for Barracks Living Units entry doors shall have lever handle on Corridor side and knob handle on room side. Locksets shall have clutching device.

5-5.6.4 Locksets for Typical Interior Utility and Maintenance Doors. spaces with doors covered by this paragraph include: Mechanical Rooms, Electrical Rooms, Telecommunication Rooms, Communication Rooms, Toilets, Janitor and Stairwell. ANSI/BHMA A156.2; series 4000, Grade 1, non-ferrous base metal, removable core.

5-5.6.5 Exit (Panic) Devices. ANSI/BHMA 156.3; heavy-duty touch-pad type, through-bolted mounting. Listed and labeled for panic protection based on UL 305. Doors shall be provided with exit device if required by code.

5-5.6.6 Closers. ANSI/BHMA A156.4; series C02000, Grade 1, hydraulic, factory-sized, adjustable to meet field conditions. Provide for all entry doors to living units, all doors opening to corridors and as required by codes.

5-5.6.7 Auxiliary Hardware. ANSI/BHMA A156.16. Provide wall or floor stops for all doors that do not

have overhead holder/stops. Provide other hardware as necessary for a complete installation.

5-5.6.8 Kick Plates. ANSI/BHMA A156.6; stainless steel, 254 mm [10"]high x 51 mm [2"] less than door width. Provide at push side of all doors with closers.

5-5.7 Roof Structure. The exposed metal roof truss and metal roof deck shall be cleaned and painted.

5-5.8 Casework.

5-5.8.1 Service Areas in Living Units and Coffee Areas in Admin Areas.
Bathroom Vanity in Living Units
Barracks Building CQ Station Reception Desk
Vanity at Public Toilets

The following typical casework description shall apply to the spaces described above:

Provide architectural cabinetwork complying with AWI Quality Standards, Section 400, Custom Grade cabinets with high-pressure decorative laminate finish, meeting NEMA LD3 standards. Horizontal laminate: nominal .050" thick; vertical laminate: nominal .028" thick. Door and drawer edges shall be plastic laminate: nominal .028" thick. Countertop shall be post-formed high-pressure decorative laminate with waterfall front edge and integral coved backsplash, or solid surfacing material. Cabinets shall be constructed as specified and shall meet requirements of KCMA A161.1. The use of any particleboard material for cabinet construction is not permitted.

5-5.8.2 Other casework. Provide architectural casework complying with AWI Section 400, Custom Grade cabinets with high-pressure decorative laminate finish meeting NEMA LD3 standards. Horizontal laminate: nominal 1.27mm [.050"] thick; vertical laminate: nominal 0.71mm [.028"] thick. Door and drawer edges shall be plastic laminate: nominal 0.71mm [.028"] thick. Work surfaces and counter shall be high-pressure decorative laminate, or solid surfacing material.

5-5.9 Window Treatments. Provide horizontal aluminum mini-blinds at all exterior windows. Blinds shall have one-inch wide by .008-inch thick slats with anti-static, anti-microbial polyester baked enamel finish. Provide heavy-duty 25mm x 38mm [1" x 1-1/2"] steel headrail, and tubular steel bottom rail finished to match slats.

5-5.10 Toilet Partitions. Toilet partition panels shall be floor supported and reinforced to receive partition-mounted accessories. Finish shall be laminated plastic on solid phenolic core. Toilet partition hardware shall be stainless steel. Latching devices, pulls, and hinges for handicap compartments shall comply with Title III of the American Disability Act and Accessibility Guidelines.

5-5.11 Elevators. The contractor shall provide the services of an elevator inspector employed by an independent testing company to inspect the elevator, witness the final testing, and certify elevator. The inspector shall meet all qualification requirements of ASME QEI-1 and shall be certified in accordance with ASME QEI-1. The contractor shall provide an elevator certificate signed by the inspector for each elevator. The certificate shall be provided to the Contracting Officer within 30 days of the completion of testing.

5-5.12 Sound Attenuation.

5-5.12.1 Testing. Certified proof-of-performance field tests will be conducted to demonstrate that the wall systems as constructed provide the required sound isolation. Tests for air-borne sound shall be made in compliance with ASTM E336. Tests for impact sound shall be made in compliance with ASTM E1007. Testing of 10 percent (minimum) of each type of wall system is required. Location of test sites will be chosen at random by the Contracting Officer.

5-5.12.2 Any wall system found to be inadequate shall have the deficiencies corrected and the additional qualifying tests conducted at the contractor's expense. Testing at the contractor's expense of greater than 10 percent of each system may be required if the Contracting Officer determines that the quality of construction

requires this additional testing.

5-5.12.3 Walls shall be designed to provide the minimum airborne sound transmission ratings and impact isolation ratings stated in Table 5-5.12

TABLE 5-5.12 - SOUND TRANSMISSION STANDARDS
FOR WALL CONSTRUCTION

Area	FSTC ¹
Walls at Barracks Bldgs. 552 between 1+1 units & single units	50
Walls at Barracks Bldgs. 552 at all Other Locations	40
Walls at Bldg. 549 at all Other Locations	40
Walls at Conference Rooms	50
Walls at Administration Spaces	40
Walls at all Mechanical Rooms	50
Operable partition at Classroom	47

Note¹: Field Sound Transmission Class. See ASTM E336.

5-6 PAINT FINISHES AND COATINGS

5-6.1 Interior surfaces, except factory pre-finished material, shall be painted a minimum of one prime coat and two finish coat. Baths and laundry rooms, and all their painted trim shall be finish painted with semi-gloss latex. Natural finished interior doors are acceptable. All other areas shall be water-based latex low sheen washable eggshell finish for walls/trims and water-based latex low sheen washable eggshell finish for ceilings. Oil-based paint is not allowed except for surfaces that require special coating. Interior paint finish may be textured. When semi-gloss and low sheen painted surfaces are adjacent to each other, the wall surfaces in the room shall be finished with semi-gloss paint to avoid having two different finishes adjacent to each other.

5-6.2 All exterior surfaces including all utility appendages, shall receive a minimum of one prime coat and two finish coats of paint. Exterior paint shall be water-based latex. Exterior low sheen stains (two coats) will be acceptable, where appropriate for wood. Oil-based paint is not allowed except for surfaces that require special coating.

5-6.3 All painting work conform to and be in compliance with Unified Facilities Guide Specifications, Division 09-FINISHES, Section 09900, Paintings and Coatings.

5-6.4 Paints used on surfaces in areas of high humidity where mildew is possible and on fabric or vapor barrier over insulation shall contain a mildewcide. The mildewcide will not adversely affect the color, texture, or durability of the coating. The mildewcide shall be incorporated into the paint by the manufacturer and shall attain a surface disfigurement rating of 8 or greater when tested in accordance with ASTM D 3273 and evaluated in accordance with ASTM D 3274. Mercurial mildewcide and insecticides shall not be used in paints.

5-6.5 Colors shall be as approved from schemes submitted with proposal. All interior paint surfaces shall be painted off-white. Each proposal shall include three basic exterior and interior color coordinated schemes and color samples. Final selection of exterior colors will be made by the Installation Commander (USAGE-HI). Exterior color selections shall conform to the Installation Exterior Architectural Plan (IEAP).

All exterior wood trim to include framing members around garage door openings shall be "back-primed" (surfaces that will be inaccessible to field painting after installation of the wood trim shall be primed with one coat of primer before installation).

5-7 PHYSICAL SECURITY REQUIREMENTS.

5-7.1 Anti Terrorism / Force Protection. Designs shall conform to the Department of Defense Minimum Antiterrorism Standards for Buildings, listed as Reference 5-2.4. Contractors' proposals will be deemed acceptable provided they comply with the Physical Security Requirements described in paragraphs described below. UEPH buildings are classified as troop billeting structures; COFs, Locker Room Facilities, and Battalion HQs are classified as primary gathering structures

5-7.1.1 The AT/FP standard used to develop the proposed design is the Department of Defense Minimum Antiterrorism Standards for Buildings. Agreements regarding definitions include the following: (refer to Civil, Structural, Mechanical and Electrical Sections for additional information)

5-7.1.2 Laminated minimum 1/4 inch thick annealed glass is required for all exterior windows and doors, defined in para. B-3.1.1. Window frames shall be provided as defined in para. B-3.1.2.

5-7.1.3 Exterior doors that are not designated as Historic Type (See concept design drawings) are required to be hollow metal door type.

5-7.2 Arms Vault at Company Operations Facilities. Physical Security of Arms shall be in compliance with AR 190-11. Refer to SOW Ch 6, for structural Arms Vault requirements. Refer to SOW Ch 2 for Arms Vault in Building 549. New floors, walls, and ceilings shall be provided for each Arms Vault. Unless more stringent construction features are required by life safety or building codes, minimum construction requirements shall be as follows:

5-7.2.1 Floor. 152 mm [6"] slab on grade; reinforced with minimum 152 mm x 152 mm MW 25.8 x MW 25.8 [6 x 6, W4 x W4] welded wire fabric, on vapor barrier, on 152 mm [6"] deep porous fill.

5-7.2.2 Walls. 206 mm [8"] thick cast-in-place concrete reinforced with 15M [#5] bars at 152 mm [6"] on center, each way, each face. Concrete masonry units reinforced in a similar manner, as described, will be permitted.

5-7.2.3 Ceiling. 206 mm [8"] thick cast-in-place concrete reinforced with 15M [#5] bars at 152 mm [6"] on center, each way, each face.

5-7.2.4 Door and Frame. Provide 44mm [1-3/4"] thick hollow metal door, industrial type construction, minimum 14 ga. skin plate thickness, and internally reinforced vertically with continuous steel stiffeners spaced 152mm [6"] max. on center. Provide steel bar type, Dutch door style daygate with metal shelf for issuing arms and ammo. Comply with egress requirements of applicable codes. See Attachment 19 for Arms Vault Door and Daygate Details.

5-7.2.5 Penetrations. Penetrations shall be minimized. All openings or penetrations in Vault floor, walls or ceiling greater than .062 m² [96 square inches] shall be protected with welded steel rod-and-bar grid weighing 39.6 kg/m² [8.1 lb./sf], consisting of 25.4 mm x 4.8 mm [1" x 3/16"] vertical bearing bars at 25 mm [1"] on center, and 8 mm [5/16"] diameter horizontal rods at 50 mm [2"] on center; or equivalent protection.

5-7.2.6 Arms Rack Anchor Rings. Provide 10 mm [3/8"] diameter stainless steel bar bent into U-shape (25 mm inside radius). Overall length shall be 127 mm [5"]; embed 76 mm [3"] of horizontal legs (open end) in pre-drilled epoxy filled holes. U-shaped end will protrude from floor to provide anchorage for GFGI arms racks. Orient the projecting U-shape vertically. Provide anchor rings at 3'-0" on center along the floor inside the Arms Vault -Verify with DPW for exact installation and mounting location.

5-7.2.7 Floor Anchors for GFGI Security Safes. Provide 10 mm [3/8"] diameter stainless steel bar bent into U-shape (25 mm inside radius) with 2" long 90-degree returns at ends of vertical legs. Overall height shall be 127 mm [5"]; embed 76 mm [3"] of vertical legs (open end) in concrete floor slab; 51 mm [2"] of U-shaped end will protrude above slab to provide anchorage for GFGI security safe.

5-8 SIGNAGE

5-8.1 Directional, Informational, and Motivational Signage. Signs consist of exterior building signage, interior signage, Interior building directories, directional signs, and identification signs. All Exterior and Interior Signage shall comply with TM 5-807-10. Coordinate with installation facilities engineer (DPW) for location of all signs, color of sign, and verbiage to be included on all signs. All exterior signs and interior Building Directory Signs shall be constructed of minimum 0.090-inch thick aluminum sheets. All other signs shall be constructed of minimum 4.76 mm [3/16-inch] thick plastic acrylic sheets. All signage shall comply with requirements of ADAAG and UFAS. Refer to Attachment No. 1 for Sign Types described below.

5-8.2 Exterior Signs: provide the following Exterior Building Sign Types:

- 5-8.2.1 Provide a total of two Exterior Building Identification Signs, one per building, Type D4, Sign grid 1, size: 762 mm H x 1067 mm W [30"H x 42"W].
- 5-8.2.2 Provide a total of four Exterior Building Number Signs, two per building, Type C8, wall mounted, Sign grid 1, size: 457 mm H x 1372 mm W [18"H x 54"W].
- 5-8.2.3 Provide all exterior doors with Room Identification Sign, Type BB2, wall mounted, size: 229 mm H x 229 mm W [9"H x 9"W].
- 5-8.2.4 Provide a total of six Exterior Guide Signs, Type AA5, wall mounted, size: 3 modules of 70 mm H x 457 mm [W 2-3/4"H x 18"W].
- 5-8.2.5 Provide a total of six Exterior Guide Signs, Type AA6, ceiling mounted, size: 3 modules of 102 mm H x 610 mm W [4"H x 24"W].
- 5-8.2.6 Provide a total of seven Company Identification Sign, Type BB2 (similar), wall mounted, size: 305 mm H x 610 mm W [12"H x 24"W]. Text Size=1" Cap with 1/2" line spacing vertically in lieu of 3/8".

5-8.3 Interior Signs: provide the following Interior Building Sign Types:

- 5-8.3.1 Provide four Building Directory Signs, two per building, Type AA1, wall mounted, Sign grid 2, size: 1067 mm H x 1219 mm [42"H x 48"W].
- 5-8.3.2 Provide all interior doors with Room Identification Sign, Type BB2, wall mounted, size: 229 mm H x 229 mm [9"H x 9"W].
- 5-8.3.3 Provide the following signs for each arms vault. All signs shall be visible to personnel when the door to the arms vault is open.
 - A. Restricted Area Sign. Sign Type G-3. Size 2'-0" (H) X 2'-6" (W). Text shall be as specified in AR 190-13, para 6-4. Sign shall be affixed to the outside of the vault wall adjacent to the vault door at eye level.
 - B. Intrusion Detection Sign (IDS) Sign shall be constructed as specified in AR 190-11, Appendix F, Figure F-1. The sign shall be affixed to the outside of the vault wall adjacent to the vault door at eye level.
 - C. Hazard Warning Symbol. The sign shall be as specified in FM 4-30.13. It shall be either NSN 7690-01-081-9584 or 7690-01-082-6709; Fire Symbol 4, Diamond Shape.

5-8.4 See accessibility section for accessible signage requirements.

5-9 ACCESSIBILITY FOR HANDICAPPED (PHYSICALLY IMPAIRED) PERSONS, BARRIER FREE DESIGN.

5-9.1 Accessibility will be based on requirements of the Americans with Disabilities Act (ADA.) Public accommodation will be provided as described in the ADA Architectural Guidelines (ADAAG.). Refer to SOW Chapter 2 for ADA requirements for individual spaces.

5-9.2 Proposed accommodations generally consist of the following:

- 5-9.2.1 Public areas will be ADA-compliant.
- 5-9.2.2 Entries and exits accessible as required by ADA.
- 5-9.2.3 An accessible path to all offices will be provided.

- 5-9.2.4 Toilets Rooms to be ADA-compliant.
- 5-9.2.5 All common use areas will be ADA-compliant.
- 5-9.2.6 ADA-compliant directional and identification signage will be provided.
- 5-9.2.7 All employee-only spaces will be provided with ADA-compliant approach, entry, turn-around and exit.
- 5-9.2.8 Where disabled employees presently exist, provide path and floor area space suitable for accommodation should be provided. No disabled employees have been identified.
- 5-9.2.9 ADA-compliant fire alarm systems are described in the Fire Protection Design Analysis.
- 5-9.2.10 ADA-compliant communication systems are described in the Electrical Design Analysis.